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THE INSANE DIATHESIS

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Early recognition of temperamental qualities which in the child, youth or adolescent indicate the existence of a predisposition to insanity, may enable the family practitioner, by timely and judicious advice, to counteract or correct the defect and so happily lessen the liability to, or entirely prevent the development of, the disease.

The phenomena which the condition presents may be readily accounted for by assuming a defect or defects in the neurons, the cell units of which the nervous system is composed, of such a nature that stimuli from the environment may not properly reach the neurons of the cortex, or, having done so, the impression made there may not be sufficiently deep and lasting or, in other words, well elaborated. Keeping in mind this conception of neuronal defect, it is easy to understand how certain individuals fail to respond to educational influences, moral or intellectual or both.

The subject of this diathesis may present palpable somatic abnormalities suggestive of similar imperfections in the nervous system. In the order of their importance, when they exist, the most prominent of these relate to deformities of the external ear, cranial and facial asymmetries, anomalies of the jaws, teeth and sexual organs. It should not be forgotten, however, that individuals are frequently seen who present conspicuous signs of bodily stigmata, as commonly accepted, but who at the same time never show any of the mental characteristics of the insane temperament; and, conversely, well-marked instances of alien mental proclivities are occasionally found associated with rare physical perfection. I refer now, of course, only to congenital cases; the condition last named might not be unexpected when the diathesis had been acquired.

It follows, then, that, notwithstanding the significance of bodily blemishes, a diagnosis can only be arrived at finally by an appeal to existing mental characteristics, which may be conveniently, but perhaps somewhat inaccurately, described as symptoms.

Hereditary influence is generally distinct and frequently conspicuous. That marked physical perfection may be inherited from one parent while the characteristic mental peculiarities descend from the other is undoubtedly true, though exceptional. In a majority of instances, the inheritance is mainly maternal, and it is similar; that is to say, similar peculiarities are transmitted.

It is convenient to separate the symptoms arbitrarily into those (*a*) occurring in childhood, that is, from birth to puberty; (*b*) in youth, embracing the age from puberty to 18, and finally (*c*) adolescence, extending from the eighteenth to the twenty-sixth year. In infancy and early childhood there is probably very frequently an increased liability to convulsions, especially at teething or at the onset of exanthemata, and later to such disorders as enuresis, night terrors, chorea and habit spasms. Sexual precocity, sometimes leading to early masturbation, is also occasionally seen during this period.

Passing on to the mental characteristics, the field is such a broad one that I can scarcely hope to do more than mention a few salient features, without attempting a definite description or discussion of them. Among the earliest manifestations may be mentioned violent outbreaks of temper, persistent insubordination to well-directed measures of discipline, extreme jealousy, selfishness and cruelty. Such a child usually—not always—falls behind his grade in school, his most conspicuous failure being in mathematics. His memory may be good, he may imitate well and, indeed, analyze somewhat, but he can rarely construct, except by imitation, nor can he coordinate well. Though he may be exceptionally brilliant even in mathematics, his extreme selfishness renders him antisocial, playmates do not respect his wishes to his liking; contact with them, therefore, irritates him.[1] He becomes solitary and left without resource; he is much in the society of his elders and very commonly forms a reading habit, which is often erroneously regarded as evidence of mental superiority.

At the approach or with the advent of puberty these characteristics may greatly diminish, or, if only moderately marked, entirely disappear. On the other hand, they may become accentuated at this time and, indeed, new ones may be added. These latter usually revolve about the sexual sphere, so that the subject suffers more or less emotional disturbance when confronted by a person of the opposite sex. This may take the form of nothing more definite than general nervousness, tremor, blushing or clammy perspiration, or it may provoke some strong morbid impulse. Cases presenting this last-named feature are liable to develop into the various sorts of "Jacks" now and then obtaining notoriety as rippers, huggers, kissers and clippers in the case of young men or elopements with the family coachman on the part of girls; but it is not with the developed disease that I am now concerned.

1. I have in mind a girl of 14, belonging to a distinguished family, who easily led her class in mathematics, but would steal from the rooms of her schoolmates so that she had to be kept at home. Happily this was one of the few cases of the kind that responded well to treatment, as in the course of about a year the morbid tendency had permanently vanished. Nevertheless, I should regard any stress as parturition through which this patient might have to pass with increased anxiety.

Occasionally there is a morbid attraction toward individuals of the same sex—homosexuality—leading to mutual masturbation or other unnatural sexual practices. Morbid jealousy, leading to homicide, may find its origin here. If the individual has had religious instruction during childhood, there is likely to be some morbid manifestation of religious feeling which is almost invariably associated with more or less sexual disturbance. A severe régime accompanied by a desire to adhere literally to biblical and pastoral injunctions, if persevered in, is suggestive. Penance is rather welcomed and likely to be overdone. Extreme selfishness and egotism, however, are prominent in this no less than in the various forms of licentiousness and debauchery as manifested in the subjects of this temperament.

In adolescence, the innumerable responsibilities of an independent existence have to be met. Many new propositions and problems are presented. Solution of the problem of perpetual motion is often sanguinely attempted by these subjects and tenaciously persevered in through failure to comprehend Newton's law of gravitation. Revolutions of various kinds are advocated very earnestly through inability properly to understand and to estimate the influences which have brought about and perpetuate the conditions complained of. By reason of the noise they make these people occasionally attract attention to an evil which has survived the causes making it a necessity, when abler minds introduce a practical remedy. This diathetic individual is often hailed as a reformer, while, as a matter of fact, he is never anything more than an agitator. He has no constructive talent; he can demolish and sometimes even analyze superficially. He never works out a reformation by himself. This psychopathic or diathetic agitator is always earnest and sincere; he is frequently manipulated, however without suspecting it, by the professional agitator, who is invariably a hypocrite. They both pose as reformers and the indiscriminating public often accepts and applauds them as such.

The ego is always relatively stupendous, even in those who shrink from social contact. They are forced into retirement, they maintain, through the objectionable qualities of other people. Intolerant of criticism, the companionship of the domestic animals suits them best and they not infrequently come to believe that there is a peculiarly intimate understanding between themselves and their pets. I knew one of these individuals to assert seriously that he was positive horses and dogs had souls, but was not yet quite decided as to cats.

These individuals who continue refractory to well-directed measures of dicipline readily fall into the criminal (by defect) class when age releases them from parental restraint, and thus their retrograde tendencies are vastly accelerated. All types are liable to drift into paranoia—chronic delusional insanity or monomania—in which the delusional state usually consists largely of an exaggeration of previous personal peculiarities. The reformer proposes to replace a monarchy with a republic; the recluse absolutely refuses to be seen by any one; he is tormented by the mysterious machinations of enemies, darkens his room and insists on having his food passed in to him; the inventor discovers new and mysterious forces; the sexual pervert finally yields to his impulses, removes a woman's shoe by force and escapes with it, clips the hanging braid from a girl's head, or kills a woman and mutilates her genitals; the homosexual pervert kills some one in a fit of jealousy, and so on. They are all likewise more than ordinarily liable to attacks of acute insanity developing from a relatively slight cause and from which recovery is often incomplete.

If Maudsley's admirable working definition of insanity be accepted, however—"a disease of the brain causing a change of thinking, feeling and acting, of such a nature as to incapacitate the individual from supporting the ordinary relations of life"— then only a very small minority of those who present unmistakable signs of the insane temperament, as above described, ever actually become insane. They are commonly spoken of as odd, queer, eccentric or even as cranks. These peculiarities constitute no part of genius though they are occasionally associated with brilliant talents.

It is a matter of common observation that under favorable circumstances, or sometimes even in spite of unfavorable circumstances these characteristics may greatly diminish or entirely disappear. The person is said to outgrow them. Influences which stimulate and strengthen the natural tendency to overcome these defects may, therefore, fairly be regarded as measures of treatment. The essential indications to be met are, as far as possible, to promote the health of the neurons and to provide them with such exercises as is best calculated to develop in them a normal degree of potential activity. The former object will obviously depend on general hygienic measures, which need not be discussed here. The means that must be used to accomplish the second object are mainly educational, moral and disciplinal. To decide on the proper application of these forces to individual cases is not always easy, but to secure it even when the indications are obvious is often impossibe. In childhood, the first requisite to this end is obedience. When, however, this element of government is once firmly established it should be used temperately and kindly. Short, perfectly prepared lessons, frequent reviews, liberal diversion, patience, perseverance and consistency on the part of guardians and teachers are a few of the leading elements of successful management. How frequently it happens that a child who has long been regarded as well-nigh incorrigible quickly and permanently becomes a model pupil on the advent of a new teacher.

Unfortunately, as the condition is so strongly marked by heredity the home influences are likely to aggravate rather than to improve it, so especially in early childhood we are often unable to suggest any other practical means of relief, both because it is difficult and appears cruel to separate a child of tender years from home and family, and because it is not always easy to find a place for him where all desirable influences will surely reach him. A well-regulated boarding school offers the best solution of the problem. There inevitable contact with a variety of other children and moral discipline are in constant operation, and these are all forces of the utmost importance, not only to the children of this diathesis but to normal children. To be sure, that peculiar bond of tenderness and affection naturally existing between mother and child, and whose value when occurring between normal individuals can not be overestimated, has to be yielded; but, under the circumstances hypothecated, this may not be a very weighty concession.

In youth, the influences recommended for childhood should be continued and especially an extra effort should be made to develop the judgment. The person should be encouraged or even frequently compelled to

act on his own responsibility. This he will always attempt to shirk, and the fond parent will almost invariably finally, if not at first, accept his excuses. Particularly youths of this temperament should not be forced to comply with some arbitrary parental conception as to their life work. This ought to be decided late and only after a careful scrutiny of their talents and tendencies. It is in these cases, if not indeed, in all cases properly a problem of adolescence.

Unfortunately, many individuals with this temperament are impelled by undue activity and a weak judgment into speculative enterprises, which of course, exposes them more than anything else to the liability of the development of their latent malady. Practically, it is not nearly so difficult to decide on an occupation or course in life that would be desirable for this or that individual, as it is to secure it for him.

The marriage of two young people of this temperament furnishes some of the darkest chapters of domestic discord and disaster ever written. When they have once fallen in love, however, the mischief has been done, for they can rarely be persuaded even to postpone their nuptials, while violent and forcible measures of interference, even if effective, are liable to precipitate the development of insanity. Unless by strategy he can offer some plausible suggestion that would involve separation and delay, the physician must observe with patient composure the early scenes of a drama, apparently merry enough, but which he knows full well is likely only too soon to be fraught with passages of the most pitiful pathos and perhaps even tragedy.

100 State Street.

CARCINOMA OF THE BOWEL AND OF THE APPENDIX IN THE YOUNG *

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In no part of the body is the onset of cancer more insidious than in the bowel. As it is a local disease at first and becomes disseminated later on, an essential for successful treatment is early diagnosis, and anything tending to aid in this respect is of great practical advantage to the surgeon. It was formerly thought that carcinoma of all structures occurred in middle or later life, and a strong point in the differential diagnosis between carcinoma and an inflammatory mass, or a benign growth, has been the age of the patient. If the age were 40 years or more the chances seemed to favor cancer; under 40 years the likelihood of carcinoma apparently decreased with decreasing years, till its occurrence in childhood has been looked on as a pathologic curiosity.

Recent reports, however, seem to show that carcinoma of the bowel, and particularly of the appendix, is met with in the young more frequently than was formerly supposed. During the past year there has been a large amount of literature on cancer of the appendix. In most cases reported one is struck by the youth of the patient. Thus, Harte[1] collected reports of 92 cases of carcinoma of the appendix and finds 4 cases in patients under 10 years of age, 13 between 10 and 20 years of age, and 34 between 20 and 30 years of age. The age of 4 patients is not given, so of the 88 patients with carcinoma of the appendix whose ages are known, 51 are under 30 years of age. Harte is impressed with this fact and explains it with the statement that "a large percentage of all carcinomatous appendices are found as a result of operations for appendicitis, and most operations of this character are done between the ages of 10 and 40 years." He believes that small foci of cancer may be found in other parts of the intestinal tract if carefully looked for.

If cancer of the appendix be discovered more frequently in the young because the age of the patient operated on for appendicitis is usually under 40, we would expect to find cancer frequently in other organs usually removed in the young for inflammatory conditions. No one has found any large number of carcinomata in the Fallopian tubes, though they are often removed in the young for inflammatory conditions. Probably the largest number of curettements is done during early child-bearing period, and though the scraping may be carefully examined, it is rather rare to find cancer of the uterus under 35 years of age.

The most probable explanation of the occurrence of such a large proportion of cancers of the appendix in the young is that it is due to the peculiar character of the appendix. Carcinoma is a malignant tumor of epithelial origin, and sarcoma a malignant tumor of connective tissue origin. We know that connective tissue is a simple and hardy tissue, requiring but little nutrition, and is able to overcome difficulties and live under conditions that would be impossible for the more delicate and highly differentiated epithelial tissue. Consequently, we find the connective tissue malignant tumor (sarcoma) can overcome the obstacle of the marked resistance of youth which the epithelial malignant tumor (cancer), being more delicate and a higher order of tissue, can not do. So cancer can gain a foothold, as a rule, only when the resistance of youth has been partly lessened by advancing years; it therefore usually begins in middle life or in old age. The appendix is a vestigial organ; its tissues are often irregularly arranged and its size and blood supply are very variable. It is a rule in anatomy that the more important an organ is the less liable are great variations to occur. A small difference in the size of an important organ like the liver or heart would be most noticeable, yet it is not uncommon to find appendices varying in length from one to six inches. The poor resistance the appendix offers to inflammation is a matter of common knowledge. It is but natural to expect, then, that the resistance to cancer of such an irregular and vestigial organ as the appendix would be very low even in the young, whose other tissues might be fully able to withstand the onslaught of this disease.

The reasons for the occurrence of cancer in the bowel or appendix in the young are these: 1. There may be a weakened resistance in patients whose tissues are prematurely old as a result of hardship or constitutional disease; this condition may, however, be purely local, as in the case of the appendix, in which, on account of the unimportance of this organ to the physiology of the body and its consequent irregular and uncertain structure, resistance to cancer is of a low type. 2. The other reason for the appearance of cancer in the young is that this disease may take a peculiarly virulent form. In other words, a weakened resistance may permit cancer of an average type to gain a foothold, or a cancer of unusual virulence may overcome a normal resistance.

* Read at the Tri-State Medical Association of the Carolinas and Virginia, Charleston, S. C., Feb. 17, 1909.

1. Carcinoma of the Appendix, Ann. Surg., June, 1908.

Gyn. Staff Room University Hospital

It has often been noted that cancer in the young is peculiarly likely to be fatal and exceedingly difficult to cure. This is true as a rule, and will readily be appreciated when the cause is either a general loss of resistance on the part of the patient, or the great virulence of the disease, or probably a combination of these two causes. But when that lack of resistance is purely local and due solely to the structural weakness of the appendix, there is no reason to expect any greater degree of malignancy than when cancer develops in persons of more advanced age. On the contrary, if the patient is otherwise of good resistance it seems that the carcinomatous process would be limited by the normal resistance of the other tissues to that portion of the body where the local lack of resistance exists. This is borne out by the fact that, though cancer in the young is usually peculiarly likely to be fatal, in the large majority of cases operations for cancer of the appendix have been followed by no recurrence after a number of years. When cancer originates in an organ whose anatomy and physiology are fixed within definite limits, and whose important functions connect it closely with the rest of the body, it is not a question of a local lack of resistance, but this defect must be shared, to some extent, by other tissues. If the development of the cancer is due to a peculiar virulence of its cells the outlook is grave wherever the cancer originates.

Fig. 1.—Photograph of the tumor before it was opened.

The case reported below is an example of an unusual form of cancer which seems to be prone to originate in the young. It does not proceed with the same rapidity that would be expected from a cancer originating in an important structure in the young. In this instance the origin and course of the cancer may be due to the fact that in the life history of this peculiar cell an unusual change takes place which results in the formation of colloid material within its substance, but not in the surrounding tissues, and after the cell has gained a foothold the colloid which develops as the cell grows lessens its virulence. The tumor, on the whole, presents on palpation and gross inspection the ordinary characteristics of a scirrhous growth, being firm and hard to the touch.

Patient.—Mrs. W. C. W., white, aged 23. Admitted to the hospital Oct. 13, 1906. Discharged, Nov. 15, 1906. Referred by Dr. J. B. Bailey, of Clayville, Va., and Dr. E. W. Gee, of Richmond, Va.

History.—About four weeks before admission to the hospital the patient had been delivered, normally, of a healthy baby. She had suffered with constipation for a number of years. About three days before admission she had severe colicky pains in her abdomen, with absolute obstruction, and gradually increasing tympanites.

First Operation.—A median incision was made. Both large and small intestines were distended. Exploration with the finger disclosed a hard mass involving the lower part of the sigmoid. On account of the great distention, this mass could not be inspected. The patient's condition would not permit of a prolonged operation, so the descending colon was drawn into the wound, fastened with sutures, packed around with gauze, and opened.

She recovered promptly from the operation, discharging large quantities of gas and fecal matter.

Second Operation.—On Oct. 24, 1906, the patient was again operated on under ether, an incision being made in the left rectus, exposing the mass that had been previously felt. It was dissected loose and brought into the wound. The tumor was in the sigmoid, adherent to the broad ligament and abdominal wall, and easily separated. It was two inches in the longitudinal diameter of the bowel and about one inch thick. The tumor replaced the wall of the bowel and almost occluded the lumen. It was hard and firm, the line

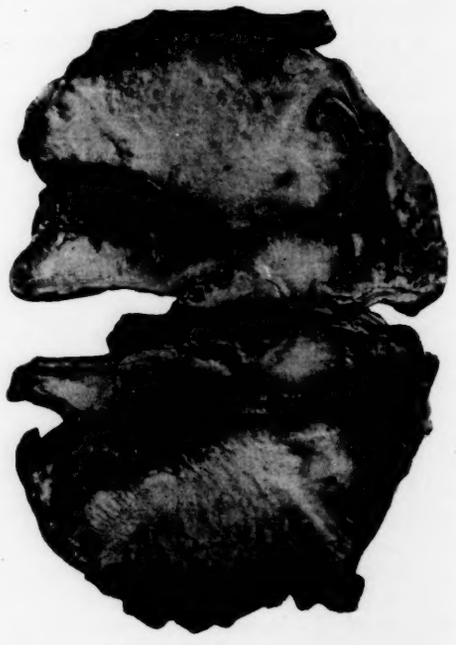

Fig. 2.—Photograph of the tumor from the lumen of the bowel after section.

of demarcation with healthy bowel wall at each end was sharp but irregular, and the mucous membrane seemed to be preserved on the lumen side of the tumor. Above and below the tumor, in the wall of the sigmoid, were small nodules that looked like tubercles, pin-head size. Similar nodules were scattered over the mesentery and the peritoneum of the broad ligament. Because the mass was thought tuberculous, on account of the apparently tuberculous nodules and the age of the patient, it was excised. The irregularity of the bowel ends and its vascularity made it advisable to insert two rows of sutures. The inner row of chromic catgut in a round needle secured all bleeding points and approximated the bowel ends. Outside of this was placed a continuous right-angled suture of silk penetrating all coats. Through a stab wound drainage was carried down to the site of the operation and the wound was closed.

The patient made an uneventful recovery. The artificial anus gradually closed without any further operation. A section of the specimen showed that practically all of the bowel wall except the mucous membrane had been destroyed by the growth, which was thick and firm. The caliber of the intestine at this point had been reduced to about the size of a uterine probe. The immediate cause of the acute obstruction was the absolute blocking of this narrow canal by a clove. The patient left the hospital thirty-three days after admission in good condition and rapidly improved in health and weight. For

ten months she did well, but in August, 1907, further symptoms of obstruction developed.

Third operation.—Sept. 20, 1907, she was readmitted to the hospital and again operated on. As had been anticipated, there was recurrence, not only in the bowel wall, but on the parietal peritoneum and all the adjacent tissues. Nodules were scattered along the whole length of the descending colon. It was impossible to excise the neoplasm, so the upper part of the descending colon was brought into the wound and a colostomy performed.

The patient left the hospital after three weeks and returned to her home. She gradually failed and died about three months later.

Microscopic Report.—The essential cell of the neoplasm was one with which I was unacquainted, so the specimen was sent for examination and report to Dr. Joseph Bloodgood, of Baltimore, to whom I am indebted, not only for the following report, but for the photomicrographs which show strikingly the peculiar cell of this growth:

"Section from one of the nodules. There is the dense zone of fibrous tissue, with a zone of tumor tissue to one side, but on the other side of the zone of fibrous tissue there are irregular areas of tumor cells. The morphology of the cell and its alveolar arrangement is better shown in the smaller areas than in the larger. The cell is of the cuboidal epithelial type of unusual morphology; the majority of the cells contain a material which does not take the stain—colloid or mucoid material. When the cell is entirely filled the nucleus is pushed to one side and becomes eccentric; there are areas where the entire cell is replaced by this material. Even in the larger tumor there is a definite, but thin fibrous-tissue mesh-work enclosing larger and smaller areas of cells. I believe the tumor is a carcinoma with colloid degeneration, a tumor which produces multiple metastases, and has been observed in young people. It can be called carcinoma cubocellulare colloides."

The cell appears edematous. Its nucleus is nearly always eccentric, which seems to be due to the fact that the colloid material accumulated in some portions of the cell more rapidly than in others and so shoved the nucleus to the periphery. On examining the photomicrograph of the higher power some cells may be seen to resemble, in a general way, a section of the eye, the clear portion corresponding to the cavity of the eyeball and the eccentric displaced nucleus the lens and cornea. Of course, it will be appreciated that if the cell happens to be cut in this direction the nucleus will be found as described. Those cells whose nuclei appear to be in the center probably have an eccentric nucleus, but, the cell being cut in a different axis, it looks as though the nucleus were central. This appearance is frequently encountered in a spindle-celled tumor when, instead of the cell being cut longitudinally it is cut transversely, which makes the section of the spindle cell look like a round cell.

Aside from its pathologic feature, this case brings to our attention the possibility of cancer of the bowel originating in the young and shows that when dealing with neoplasms of the large intestine we should not exclude carcinoma because of the youth of the patient. As regards prognosis, when cancer in the young is not due to a lack of general resistance in an important organ or to a peculiar virulence of the disease, but merely to the lowered resistance of a vestigial organ, as the appendix, the chances of permanent cure after excision are excellent.

Fig. 3.—Photomicrograph of a characteristic field of the neoplasm herewith reported.

Fig. 4.—Photomicrograph of the same field as shown in Figure 3 under higher power. Note eccentric nuclei and dense connective tissue.

303 West Grace Street.

Human Intestinal Juice.—Salzberg-Faifel (*Arch. internat. de physiol.*, 1908, vi, 81). From a human intestinal fistula relatively normal and pure intestinal juice was obtained. The intestinal juice was markedly alkaline. The alkalinity was due to the presence of alkaline phosphates rather than to carbonates. Expressed in terms of sodium carbonate the alkalinity ranged from 0.35, 0.46 to 0.56 per cent. The average specific gravity was 1.014; the average freezing point, 0.615 degrees C. On chemical analysis no sugars or other substances which reduce Fehling's solution were present. There were no coagulable proteids. The juice was 98.2 per cent. water and 1.02 per cent. non-combustible material. It contained the following ferments: Erepsin, amylase, invertin and enterokinase.

EROSIVE AND GANGRENOUS BALANITIS

THE FOURTH VENEREAL DISEASE

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Simple balano-posthitis, due to retained smegma, the secretions of gonorrhea, chancroidal infection and the decomposition of diabetic urine, has long been recognised by the various authors on genitourinary surgery. A specific form of balanitis has been recognized by French authorities for many years and more recently by German authors. The subject seems to have received but slight attention in this country. After a careful survey of the American text-books, including Watson and Cunningham, Keyes and Keyes, Fuller, Taylor, White and Martin, we are unable to find a description of a balanitis due to a specific organism.

At the medical congress in London in 1881 Simon[1] demonstrated a yeast, together with many motile spirochetes, in the secretions from the sulcus coronarius of a diabetic patient.

Bataille and Berdal[2] in 1889-1891 separated and described a contagious form of balano-posthitis, which they later called *balano-posthite érosive circinée,* and demonstrated its contagiousness experimentally.

Ceillag and Drulle[3] found a spirillum in men which was identical with those on the clitoris of women.

In September, 1904, Scherber and Müller[4] examined fifty cases of balanitis erosiva in Finger's clinic; they were able to isolate a spirillum and a vibrio and to confirm the findings of Bataille and Berdal. The same observers, stimulated by their findings in balanitis erosiva, examined six cases of gangrenous balanitis, and were able to demonstrate the same group of organisms. To those men belongs the distinction of establishing balanitis erosiva circinata and balanitis gangrenosa as a distinct malady, which they called, and, we believe, justly, a fourth venereal disease.

Recently we had under our observation five cases of this specific form of balanitis. Of these we wish to report in detail three case histories.

In presenting this subject we shall have to consider briefly the spirochetal diseases. These include:

1. Recurrent fever.
2. Frambesia tropica.
3. Dourine, a venereal disease of horses.
4. Syphilis.
5. Vincent's angina and other ulcerative diseases of the mouth.
6. Gangrenous processes occurring in various parts of the body, and including the disease under discussion.

The first three diseases, recurrent fever, dourine and frambesia tropica, are of interest to us only inasmuch as they are each due to a specific form of spirochete. Syphilis is now conceded by all to be due to the *Spirochæta pallida,* whose morphology has been so well described as to need mention only.

The spirochetes found in Vincent's angina, ulcerative stomatitis, noma and other gangrenous processes are so closely associated with balanitis erosiva or gangrenosa as to merit special discussion.

It has long been known that several forms of spirochete were normally found in the mouth. The following, on account of their intimate relation to our subject, will bear a somewhat detailed description:

1. *The Spirochæta buccalis of Cohen.*—This organism is 10 to 20 mm. long by 0.5 mm. wide. It often appears threadlike or resembling a whip; the windings are long, the ends are sharp and end in the center of the spiral; they may be ciliated. In the hanging drop they are very refractile and show a bending and snakelike motion. They are very active and vary greatly in size and thickness. In comparison with other forms of the spirochete they are characterized by their greater width. In the body are found at times red nuclear granules.

2. *The Spirochæta dentium of Koch.*—This spirochete is the smallest and most delicately formed. It usually measures about 4 to 10 mm. in length and is so thin that the breadth is not measurable. Its windings are short and regular. Its elasticity is marked.

This form simulates the *Spirochæta pallida* somewhat closely. Whether or not these two forms represent varieties of one and the same organism has not been demonstrated.

These organisms have the following features in common:

1. Drying easily kills them.
2. They stain in the cold with the ordinary stains.
3. They are Gram-negative.
4. With the Giemsa stain they are colored bluish-red.
5. They are anaerobic.

Of the spirochetal diseases that occur in the mouth we have Vincent's angina, noma and mercurial stomatitis. In all these conditions the exciting cause seems to be the same.

In Vincent's angina the etiologic factors are a vibrio and a spirochete. This was confirmed by Rauchfus and Plaut in 1893-4. The primary location is usually on the tonsil and edge of the gums and is characterized by the formation of a pseudomembrane which is easily removed, disclosing ulcers. These may become confluent; sometimes they are very superficial. The submaxillary and retromaxillary glands are enlarged, firm, but rarely suppurate. The constitutional symptoms are slight.

Following the exanthematous disease, particularly measles and diphtheria, there occurs at times a gangrenous stomatitis or noma, characterized by extensive gangrene of the cheek, which may extend to the maxillary bones, in most cases being followed by death.

The first symptom to attract attention as a rule is the offensive odor of the breath. On examination a black necrotic spot is seen on the inner surface of the lip or cheek, surrounded by tissues that are intensely swollen and edematous. This rapidly becomes in turn gangrenous and we may have extensive sloughing of the tissues. In the border of the necrotic membrane we find the fusiform bacillus and the spirochete in pure cultures.

Matzenauer[5] asserts that noma and hospital gangrene are due to the same cause, which is identical with the organism found in Vincent's angina.

1. Simon, O.: Balano-posthomykosis, Tr. Internat. Med. Cong., London, 1881, iii, 138.
2. La balano-posthite érosive circinée, Méd. moderne, 1891, ii, 340.
3. Quoted by Hoffman: Centralbl. f. Bacteriol. u. Parasitenk., 1906, xli, 741.
4. Arch. f. Dermat. u. Syph., lxxvii, 77.
5. Matzenauer, R.: Noma und Nosocomialgangrän, Arch. f. Dermat., 1902, lx, 373; ibid., 1901, lv, 67.

Rona[6] in 1905 examined three cases of noma following measles. His conclusions are as follows:

Noma begins without exception in gangrenous stomatitis. If the fusiform bacillus and spirochæte found in the mouth are etiologic factors in gangrenous stomatitis, since the organisms are found in such abundance in noma, it must be due to the same cause.

Since all these conditions are favored by lowered resistance, which is produced by the exanthematous diseases and the administration of mercury, it is not to be wondered that organisms that are saprophytic can easily become pathogenic.

Lichtwitz,[7] Sabrazis[7] and Silberschmidt[8] found the organism in the antrum of Highmore, Miller[9] in an alveolar abscess, Pollard[10] in an abscess of the leg.

Perthes,[11] Krahn,[12] Ellerman[13] and Buday[14] found the organisms in the deeper layers of the tissues; Scherber and Müller[4] found them in the lumen of the vessels, whence they may disseminate and produce a spirochetal septicemia or cause metastatic abscesses. Plautt[15] found the organism in a tonsillar abscess, Raoult and Thiery[7] in a subtonsillar abscess.

Schmorl[16] demonstrated the organism in abscesses of the liver, spleen and lung, and other observers have found them in abscesses of the brain and appendiceal stump; so we see that there is an abundance of clinical evidence showing the pathogenicity of the organism.

In the preputial sack the moisture and warmth favors the growth and, as these organisms are anaerobic, this location is an ideal culture ground.

DEFINITION

Erosive or gangrenous balanitis is a specific infectious venereal disease, caused by a symbiosis of a vibrio and a spirochete, with local and constitutional symptoms varying with the severity of the infection.

ETIOLOGY

The first predisposing cause is a long tight foreskin, which seems to exclude the air. This must always be present in a greater or less degree, as the organisms which produce this form of balanitis are anaerobic. The second is wetting the labia or penis with saliva. As this form of balanitis is so closely associated with noma, Vincent's angina and mercurial stomatitis in its bacteriology, it is highly probable that the cause of the infection is the same in the two diseases. The third is unnatural sexual relations due to alcoholism.

The existing cause of this form of balanitis, as stated before, is a symbiosis of a vibrio and a spirochete. These two organisms are always found together, but, as the spirochetes are found under normal conditions in the preputial sac, it is highly probable that the pathogenic factor is the vibrio. This organism occurs most abundantly in the deeper layers of the necrotic membrane, while the spirochetes are found less abundantly and in the upper portion of the necrotic membrane. Both have been demonstrated in sections, in the blood vessels and in the inguinal glands.

The vibrio grows under anaerobic conditions on serum agar. It occurs singly or in chains of two or more individuals. It is a slightly curved rod-shaped organism with pointed ends, measuring from 2 mm. in length to 0.8 mm. in width. It stains by the ordinary dyes and is Gram-positive, although the decolorization must be performed very carefully, as the organism gives up the gentian violet very readily. It is preferable to use 70 per cent. alcohol for this purpose.

The spirochete is Gram-negative, but stains with the ordinary dyes; with the Giemsa stain it takes a bluish red. These organisms are best seen with the dark ground illuminator. They average from 6 to 30 mm. in length and about 0.2 mm. in width. The windings are not acute and the ends of the organism terminate in the center of the spiral. The motion of the organisms is very rapid; they travel from place to place, resembling a small snake; they have a rotary motion, but this is not as pronounced as the backward and forward motion.

PATHOLOGY

The pathologic condition in the milder forms of balanitis erosiva circinata consists simply of a flaking off of the epithelium, leaving small superficial erosions. When the desquamation is more marked there are bright red ulcers, which are surrounded by a small white zone, the remains of the necrotic epithelium.

In the surrounding tissue there is an exudation of leucocytes and plasma. The organisms are found in the secretions from the erosions, but more abundantly in the necrotic membrane. At times they can be demonstrated in the tissues and blood vessels, as shown by Scherber and Müller.

In the more severe grades of infection there is more venous stasis and more exudation, resulting in marked phimosis which predisposes to gangrene. As Scherber and Müller pointed out, the whole condition is one of degree only, but for clinical purposes we may distinguish two types: (1) Balanitis erosiva circinata and (2) balanitis gangrenosa.

SYMPTOMS

Balanitis erosiva circinata commences with the appearance of one or more small grayish white patches in the preputial sack. At the time of the development of the erosion an offensive thin pus is produced, with a characteristic stinking odor and of the usual yellowish-white color; in the more severe cases it becomes grayish-white or grayish-brown.

In the mild cases the foreskin may be easily retracted, but in the more severe forms marked phimosis develops; there is considerable itching and burning behind the glans; the act of urination is practically without pain. In contradistinction to the gangrenous form in this type of the disease, constitutional symptoms are slight or absent.

Generally the sulcus coronarius is the site of predilection; next, the adjacent part of the prepuce, and, last, the glans.

As the process follows no hard and fast lines there are certain deviations from the above picture. The process may be limited to the glans and the inner surface of the foreskin be unaffected. This may be extreme or mild, but is always present on the covered portions of the glans.

The inflammatory condition may remain a purely erosive superficial process and may recover spontaneously, or by the aid of mechanical cleansing and antiseptic treatment.

6. Arch. f. Derm. u. Syph., lxxiv, 171.
7. Quoted by Feldmann: Wien. klin. Wchnschr., 1906, p. 696.
8. Centralbl. f. Bacteriol., 1901, xxx, 159.
9. Deutsch. med. Wchnschr., 1906, No. 9, 348.
10. Wien. klin. Wchnschr., 1905, xviii, 1236.
11. München. med. Wchnschr., 1902, xlix, 1968.
12. Mitt. a. d. Grenzgeb. d. Med. u. Chir., vi, 202.
13. Centralbl. f. Bacteriol., xxxviii, 383.
14. Beitr. z. path. Anat. u. z. allgem. Path., 1905, xxxviii, 255.
15. München. med. Wchnschr., 1907, liv, 340.
16. München. med. Wchnschr., 1907, No. 4, p. 188.

In a number of cases the process does not remain superficial, but develops deep diphtheritic and gangrenous ulcers, which complicate the clinical picture in many ways.

In some cases when one is able to retract the foreskin, one sees after removal of the pus, inside of the erosions small round ulcers varying in size from a pin-head to that of a pea.

These ulcers are moderately deep and on the whole flat and surrounded by a red zone. They are covered by a closely adherent pseudomembrane. In other cases the ulcers are more extensive and deeper, the average size being about that of a dime. These may become confluent and extend over the whole surface of the sulcus or the inner surface of the foreskin.

These balanitic ulcers are of a somewhat irregular outline and are surrounded by a small inflammatory slightly elevated border. This border is clean-cut and the sides somewhat slanting; the base is uneven with a firm yellowish-white or yellowish-brown membrane, which is often edematous and swollen. When more edematous this false membrane appears as a sort of friable slime. Here and there may be hemorrhagic spots which sometimes give rise to hemorrhages from the base of the ulcer.

In the severe forms the constitutional symptoms are more marked. Scherber and Müller noticed in a majority of their cases chills and fever and at the onset vomiting, the average temperature ranges from 100 to 101 degrees. There is marked edema, the external skin being red and edematous; the infiltration may extend to the root of the penis in some cases. The dorsal lymph cord is usually palpable and the inguinal glands are enlarged, but not painful. Unless the phimosis is complete there is no pain on urination; when, however, the urine is not able to pass freely and dilates the preputial sac there is considerable pain.

The discharge is the most profuse in this type of the disease. By gently irrigating the preputial sac with sterile water and wiping the external urethral orifice we can easily exclude a gonorrhea by having the patient urinate in two glasses.

In the majority of cases of balanitis gangrenosa there occurs a marked edema of the subcutaneous tissue of the penis which extends to the root and causes a marked phimosis. If the ulcer is situated on the inner surface of the foreskin it shows externally as a dark, bluish-red area within the surrounding bright red inflammatory tissue. The congestion and abnormal pressure, due to the edema, favor in a marked degree the progress of the disease.

Soon the foreskin over the ulcer becomes black and a complete necrosis of the part occurs. If the ulcer is situated on the glans, in a short time it may produce complete destruction of the same or may even cause an extremely rapid gangrene of the organ which may extend even to the root of the penis, as may be seen by the third case reported in this paper.

The ulcers in these cases are deep, the edges sharp and perpendicular, the base grayish-green or brownish; or it may show hemorrhagic areas or be changed into a black necrotic mass.

The discharge at this time is more offensive than in the erosive type; it has a grayish-yellow or grayish-brown color and at times it may be slightly hemorrhagic, but always with the same characteristic odor. The inguinal glands are enlarged; there is a mild grade of sepsis present. General malaise is marked. There may be vomiting and the temperature may reach 104. The tenderness of the part is extreme.

DIAGNOSIS

This disease is not so uncommon as one might suspect; in fact we believe that it is very common and is usually mistaken for chancroidal infection. The period of incubation may be the same in the two conditions; but with the characteristic thin yellowish white offensive discharge, in which one finds a vibrio-form organism and a spirochete, the diagnosis should not be difficult.

The ulcers of the two forms of infection may simulate each other very closely. In this form of balanitis when the infection is at all severe there is marked phimosis and considerably more inflammatory reaction. The enlarged inguinal glands are painless, while with a very insignificant chancroidal sore a suppurating bubo is often present.

Chancroidal ulcers are as a rule multiple, but they do not spread with as great rapidity as do the ulcerative forms of balanitis. Whereas the ulcers in both diseases have a clean-cut punched-out appearance, there is greater tendency to undermine the wall in chancroidal infection.

In chancroidal infection we find the Ducrey-Unna bacillus and do not find the vibrio or the spirochete.

On account of the indolent adenopathy that accompanies balanitis erosiva, it must be differentiated from syphilis. In syphilis the period of incubation is longer, although the two infections may occur simultaneously, as reported in one of Scherber's cases. When such a condition exists we may be compelled to defer our diagnosis of syphilis until the period of incubation for syphilis has elapsed; or in case of a mixed lesion the *Spirochæta pallida* may be easily demonstrated by the dark ground illuminator and is so characteristic as to be easily differentiated from the spirochete of balanitis.

Herpes preputialis always occurs as groups of small insignificant vesicles in which local reaction is mild or entirely absent. This condition simulates somewhat the mild form of balanitis erosiva, but in herpes one fails to find the organisms characteristic of balanitis.

TREATMENT

As a prophylactic measure the practice of circumcision should be encouraged; it is absolutely impossible for balanitis to exist in an individual who has been circumcised.

In many cases in which the condition is mild and the foreskin can easily be retracted all that is necessary is a thorough cleansing, but in the mild ulcerative forms in which there is the slightest evidence of phimosis a dorsal incision should be performed. As the organism of balanitis is anaerobic, this incision serves a twofold purpose, that is, of admitting air and exposing the diseased parts for treatment.

Previously we were in the habit of burning all these sloughing ulcers in this disease, but such treatment subjects the patient to needless punishment. As we have said above, the organisms of the disease are anaerobic, and as hydrogen peroxid liberates oxygen when in contact with organic matter, it acts as a specific for this form of infection.

We use the ordinary 2 per cent. solution, but in severe cases of gangrenous balanitis, 25 per cent. was painted on the parts.

REPORT OF CASES

CASE 1.—*History.*—The patient, M. M. W., aged 40, married, denied all previous venereal history. After four days' incubation the patient noticed itching and burning around the glans penis. There were no constitutional symptoms. During the first week this continued as a mild balanitis. The patient was able to retract the foreskin. Treatment was neglected. At the end of the first week conditions suddenly became worse; the foreskin began to swell and the patient was unable to retract it. At this time he presented himself for examination.

Examination.—The general muscular development was good; there were no scars or evidence of previous venereal disease. The penis was swollen and edematous; the edema extended about half way up the shaft of the penis, giving it a pear shape. The skin over the glans portion was red and slightly injected. There was complete phimosis. Exuding from the opening was thin, yellowish-white pus, with a penetrating odor, in which was found a vibrio and a spirochete. There was constant burning pain which was increased on the slightest pressure. There was no urinary pain. The dorsal lymph cord was easily palpable; the inguinal glands were slightly enlarged but not tender. There was no fever.

Treatment.—With a small hand syringe 2 per cent. hydrogen peroxid was injected every hour into the preputial sack. By the second day the foreskin could be retracted, showing numerous small ulcers with sloughing bases with sharp borders, involving the sulcus and the covered portion of the glans.

These healed rapidly under the above treatment.

Balanitis erosiva seu gangrenosa, erosive type.

CASE 2.—*History.*—The patient, M. W. M., aged 26, Irish, denied syphilis; had had a supposed chancroidal infection two years previously. Two weeks before presenting himself, the patient had intercourse. After three or four days there was a little itching beneath the prepuce. At the end of six days he presented himself for examination.

Examination.—The temperature and pulse were normal. The general nutrition was good, and there were no signs of latent syphilis. There was a large indurated swelling of the penis. From the preputial orifice exuded a thin, yellowish-white, stinking discharge. This was examined for gonococci but none was present. There was phimosis, but not complete. With dilatation, the little finger was gently passed between the foreskin and the glans. The whole covered portion of the glans and the inner leaf of the foreskin was covered with small ulcers, having necrotic, sloughing bases. Those on the inner leaf extended to the border of the preputial fold; by gently pulling back the foreskin the whole could be plainly seen. The dorsal lymph cord could be plainly felt and the inguinal glands were enlarged but not tender. There were no constitutional symptoms.

Treatment.—The patient was given a wash of hydrogen peroxid, full strength. As he did not return to the clinic, we presume that his condition was satisfactory.

CASE 3.—*History.*—The patient, A. G. G., aged 43, American, denies all previous venereal history. He had had intercourse nine days previous; at this time, the patient said the prostitute lubricated her labia with saliva. The following day the glans portion began to swell; there were chilly sensations, no nausea or vomiting. Previous to this time the patient's glans penis was exposed between the preputial fold and the foreskin could be retracted. On account of the rapid phimosis that developed this could not be accomplished later. The local symptoms increased rapidly; by the third day gangrene had set in.

Examination.—When the patient presented himself at the clinic he was well nourished; muscular development good. There was slight septic intoxication. The entire preputial covering for a distance of three inches was one black, necrotic mass. By gentle manipulation the necrotic mass could be drawn away and deep sloughing ulcers, with sharp borders, could be seen extending into the penis above the glans. There was considerable thin, slimy pus, with an odor of necrotic tissue present. Here we were able to find the organism in large numbers. The remaining portion of the penis was dark red and infiltrated the edema extending to the root; the inguinal glands were enlarged. The patient's temperature was 102; malaise was marked.

Treatment.—The patient was sent to the county hospital. Here the necrotic foreskin was cut away, and just above the glans portion, at the site of the inner preputial fold, could be seen two deep ulcers. The glans portion was necrotic. In forty-eight hours the entire glans portion, together with about one and a half inches of the shaft of the penis, sloughed off, leaving a short stump. The patient was treated with irrigations of potassium permanganate three times a day, but the organisms had already invaded the deeper layers and gangrene was unavoidable.

CONCLUSIONS

1. We agree with Scherber and Müller that there is a characteristic clinical picture or form of erosive gangrenous balanitis, which under favorable conditions may cause deep and widespread gangrene, and which is of sufficient importance as to be called a fourth venereal disease.

2. In the erosive and gangrenous types there is regularly found a micro-organism (vibrio), which we consider the cause of the disease. In addition to this organism there is constantly present a Gram-negative spirochete.

3. On account of the rapid development of phimosis with a tendency to produce gangrene, it is imperative that a diagnosis should be made at once.

4. As we have a specific in hydrogen peroxid, its early use will prevent extensive destruction.

5. Whether these organisms are identical with those found in similar processes in the mouth and pharynx is still a question.

103 Randolph Street.

CERVICAL DILATATION

A SIMPLE (AND ORIGINAL?) METHOD WITHOUT LOCAL OR GENERAL ANESTHESIA *

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Dilatation of the cervical canal of the uterus does not yet stand on a thoroughly scientific basis; nor is its mode of action in some cases clear. Probably a mechanical or neuromechanical hypothesis would come nearer answering in most instances, than any other explanation. We all know that its results have not by any means been uniform; sometimes they have been good, oftentimes poor and in other instances absolute failures. Considerable observation has led me to believe

* Read before the Louisville Society of Medicine.

that in many cases failure may be attributed to the fact that the dilatation or the dilatation and subsequent curettage was surgical, with unavoidable surgical traumata, that the operative work was not considered preparatory but was allowed to stand alone as a curative agent without that subsequent treatment for lesions that lay within the pelvis itself, or for those general or nervous disorders that are so often associated with the local conditions that have demanded the intervention of this method.

In these days of aseptic surgery the use of laminaria and tupelo tents has been practically abandoned, because of the likelihood of septic infection, one of, if not, the greatest danger attending dilatation. Many uteri are already infected, and anything that bruises, lacerates or produces pressure, that interferes with the circulation, offers a well-fertilized field of devitalized tissue for microbic action.

Surgical methods to-day occupy the central portion of the stage when it comes to dilating the uterine neck. Few stop to consider or realize the enormous

Illustration of instruments. 1. Bivalve speculum, interior insulated. 2. Massey's flexible electrode. 3. Author's straight intrauterine electrode. 4. Author's curved intrauterine electrode; note steel cap for holding zinc of electrode. 5. Author's uterine sounds with perforations for attachment of cord. 6. Dilator; note small holes near screw on handle for attachment of bifurcated cord. 7. Tenaculum forceps. 8. Dressing forceps. 9. Bipolar vaginal electrode.

psychic influence of preparation and fear of operation that even the simplest surgical procedure demands. Among the most disagreeable features are the anesthetic and its subsequent effects. Most laymen object to an anesthetic and in fact consider this the greatest handicap to operative procedure, really fearing the knife less than anesthesia.

Surgical dilatation of the cervix uteri requires removal of the patient to a hospital and preparation for at least one or two days before the operation, with a minimum of from two to fourteen days of subsequent confinement to the hospital. This latter is, however, not an unmixed evil, for many of these patients are benefited by the partial rest treatment following the operation

CURRENTS AND THEIR ACTION

In order to appreciate the modus operandi of the method I wish to present, it is necessary to digress somewhat from the main proposition and consider properties of electrical currents and their polar re-action. Electricity has been employed for years in the treatment of various obstructive conditions of human canals, notably those of the uterus and urethra, when these for any reason were closed, distorted or obstructed and I feel sure that it would be more generally used were its varied actions clearly understood by the profession at large.

The currents I employ in dilating the cervical canal of the uterus are the galvanic and faradic; they must be employed with the care, in the manner and in the sequence described in order to secure the results, described in this communication.

Only a passing word can be said of apparatus; the best is none too good. With his electrical apparatus the operator must be as familiar and conversant as the surgeon with his instruments; he must possess a correct technic and be able to so modify and change minor details so as to overcome special or peculiar conditions in any individual case.

Among its many and varied properties, the galvanic current possesses the power to stimulate molecular and osmotic processes, producing an electrolytic action on living tissues, accompanied by a transference of ions. It may be stated here that an ion is an atom carrying an electrical charge. In the method I employ the cathode or negative pole is employed and no other; the positive never. When the galvanic current is turned on slowly and the "flow" between the poles is established a profound hyperemia at the negative pole results, with increased fluidity and a local accumulation and excess of the electro-positively charged ions of hydrogen, sodium, potassium, ammonium and calcium with a resultant formation of their alkaline caustics, the hydrates of hydrogen, sodium, etc. At the same time the current exercises an electro-antiseptic-anesthetic action peculiar to both poles.

With a large pad on the abdomen attached to the anode or positive pole, and with the cathode or negative pole in the uterus, what takes place? The tissues are flooded with blood, rendered more fluid and rapidly softened by the diffusive absorbtion or accumulation of the alkaline caustics above referred to, this rendering them less resistant and much more easily dilatable. At the same time, those nutritional effects the result of the current *per se,* and its accompanying hyperemia becomes manifest. So much for the galvanic current.

A high tension faradic current, from a secondary coil of exceedingly fine wire, of great length is used. A coil of this character is distinctly sedative, pain-relieving and an obtunder of sensibility. A faradic outfit to possess these qualities must at least have a coil of No. 36 wire (or smaller) of many turns; the ribbon vibrator must "sing" smoothly, evenly and with the least possible variation and be activated by at least four cells or from the "main" current.

METHOD OF APPLICATION

Immediately succeeding a careful local examination and diagnosis, the nurse is instructed to place a large-sized pad on the abdomen attached to the positive pole. I then introduce through a bivalve speculum the small flexible electrode designed by Massey to determine the obstruction, as well as the direction of the canal. This is easily accomplished, as a rule, when five to ten

milliamperes of negative current is allowed to flow. In passing it may be noted that the introduction of the flexible electrode or of my uterine sounds and the dilator is oftentimes much less disagreeable than the introduction of an ordinary uterine sound, because of the resolving influence of negative electrolysis, under which obstructions soften and break down. Having determined that it is necessary to dilate the cervix, the patient is told nothing, but is given a laxative to be taken at night, followed by a brisk saline next morning on arising, such as citrate of magnesia. If it is deemed wise or as an additional precautionary measure an enema may be taken. Prior to leaving home, or in sanatorium practice immediately preceding the dilatation, the patient is given a vaginal douche of hot normal saline. All the instruments are thoroughly and carefully sterilized, and the hands of the operator are cleaned and rendered reasonably sterile.

The nurse places the patient in the dorsal position on the table with a pad on the abdomen; if the position of the uterus is normal or antedisplaced (that is to say ante-version, flexion or lateral displacement) and on the back if retrodisplaced. The cervix is exposed by the ordinary bivalve speculum or my electrical speculum. I select an electrode properly insulated or an electro-dilating sound to suit the supposed curve of the canal and introduce it gently into the canal under the influence of the negative pole of the galvanic current. The electrode is then withdrawn and the small dilator gently insinuated into the cervical canal as far as it will conveniently go.

No force should be used and the dilator should never be pushed through the canal. If necessary, the cervix can be steadied by means of tenaculum forceps, though this is not, as a rule, necessary.

The nurse is then instructed to place the De Watteville or the Pope Current Selector on the combined galvanic and high tension faradic current buttons. The switch is then thrown so that the negative pole of both currents travel along the cord which is at this time inserted into the two sockets on the handle of the dilator.

The galvanic current is first employed with an average dosage of ten millimeters. The dilator is gently passed through the canal until its tip just clears the internal os and is there allowed to remain approximately a minute or two, is then withdrawn a little and is then reinserted to permit free exit of any gas generated. While the galvanic current is flowing and with the dilator within the cervical canal, the high tension faradic current is turned on to the point of comfortable tolerance. Then gradual, slow and intermittent dilatation is practiced, the dilator being turned so as to bring every part of the canal and internal os in contact with the lips of the instrument. It will be noted that the dosage of the galvanic current is very small, thus avoiding cauterization at any point.

At the end of from five to ten minutes, first the faradic current and then the galvanic is turned off gradually and slowly; both must be controlled by a reliable rheostat. The dilator is then withdrawn. With its withdrawal there is usually a fair amount of frothy discharge slightly tinged with blood, the result either of the hyperemia or rupture of small blood vessels; this may be disregarded. The cervix is wiped clean with aseptic cotten, and, if it be deemed necessary the cervical canal may be likewise cleaned; this is rarely ever needed. While it is best for the patient to remain quiet for from half to one hour, still it is not necessary. I have patients to immediately step down from the table; return to their homes on foot or by a street car, resume their household duties at once and in fact remain ignorant of the work accomplished.

The most frequent complaint that I have had has been of a sense of weight or heaviness. This is due to the action of the galvanic current itself and not to the dilatation, and is often present in cases in which dilatation has not been performed. If this weight (or tenderness, if we so care to term it) is present after the removal of the dilator, remove the speculum and introduce a bipolar vaginal electrode, placing the anterior tip of the electrode well under the cervix or deep in the cul-de-sac; turn on the high tension faradic current slowly, keeping it at the highest tolerance for from seven to ten minutes. This usually gives immediate relief.

Following such a dilatation there is usually a free mucoid discharge, sometimes mucosanguinous for several hours or possibly a day, but this quickly disappears, and no further so-called surgical precautions are demanded, than to keep the bowels open and use a hot normal saline douche the next morning. I usually limit meat eating both before and after the dilatation.

The advantages of the method above enumerated are numerous. The psychic fear of operation, the dread of anesthesia and the confinement to bed in a hospital are avoided. It is rapid and so far as my experience is concerned to all practical purposes a painless operation. There is less likelihood of necessity for subsequent dilatation, although dilatation by this method if need be can be repeated many times. Scars resulting from ordinary or surgical traumata are hard and contractile, while the scar resulting from negative, galvano-faradic dilatation is soft and distensible; a characteristic of galvanic negative polar scars anywhere in the body.

CASES IN WHICH THIS METHOD IS INDICATED

I am satisfied that this method is not available in cases in which there are retained secundines and marked acute infection. These are eminently surgical cases and demand thorough curettage. I consider that this method meets all the requirements of those chronic cases which obstruction must be overcome and drainage secured, sometimes this being all that is necessary.

To overcome obstructions or stenosis in the canal associated with flexions and displacements, whether the stenosis be primary and accompanied by the so-called pin-hole os, or cicatricial following operation, pressure, sloughs, labor, the applications of acids, caustics of ulcerative changes, this method will be found to answer the purpose, by securing free drainage through the cervical canal for the retained uterine secretions or menstrual blood. It will be found of use in dysmenorrhea due to oöphoritis, salpingitis (without suppuration) and in those cases in which the organs seem normal but great pain is present at the menstrual periods, as well as in those cases in which the pain begins before the flow for a few hours and is sharp and intense in character. Patients with metritis, cervicitis, and endometritis, in whom we have to deal with hypertrophied and swollen mucosa, in whom the uterus is flabby and its walls atonic, or in which hard and hyperplastic, and in whom the obstruction has dammed up the secretions, are particularly benefited.

In the imperfectly developed or infantile uterus it is an ideal method for opening the canal preparatory to

intrauterine applications of coarse wire faradic electricity for muscular development, as well as in those cases of sterility in which a mechanical hindrance or a thickened mucosa prevents conception.

It is valuable in uterine hemorrhage as a preliminary to obtaining scrapings or for preparing the canal and uterine body for heavy currents of positive galvanization. In preparing those persistent cases of amenorrhea, with small canals, it is almost a certain panacea, when followed by negative galvanization.

In inflammations resulting from gonorrheal infection it not only secures free drainage but tends to wash out in the hypersecretion that follows its application, the specific germ. If the dilatation is followed the next day by the application of positive copper or zinc-mercury electrolysis, those who have never employed the method will be astonished at the prompt results obtained.

In those cases of hypersecretion or of congested uterus, found frequently in fat women or in the hypersecretion of subinvolution, anemia and chlorosis, it is a preparatory method of value.

I have had access to and searched diligently through the literature of the subject at my disposal and so far have been unable to find a description of this method and for that reason I have stated it to be original.

PENMANSHIP STUTTERING *

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The case to be reported shows a condition that I believe has never before been observed or described.

History.—Mr. A., aged 38, had written shorthand exclusively from 14 to 18 years of age, and then shorthand and typewriting with very little longhand until 22. After three years illness he took up shorthand again for one year. He then

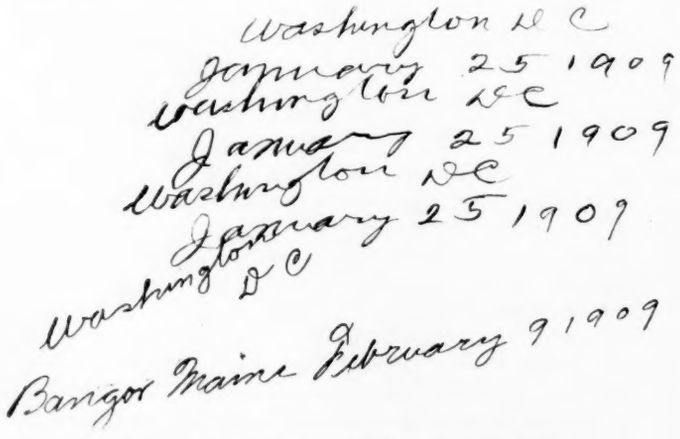

Fig. 1.—Specimens of the writing of the patient.

obtained employment as a teller in a bank where he had to fill out names on deposit slips. He was told that his writing was bad and was urged to improve it. He tried to do so by taking courses in penmanship, by imitating the penmanship of other persons, etc. This resulted in the ability to write well when he could do so slowly and coolly but in a worse result whenever he did his work at the bank. On entering the bank in the morning he is seized with a nervous fear and a dread of writing poorly. The first few slips will be written fairly well but the anxiety soon brings on a condition in which the writing grows worse with each word. The specimens reproduced in Figure 1 show that, even in my office where he is not particularly worried, the writing grows steadily more cramped and tremulous as he approaches the end of a word. He explained that he had suffered so much on account of his writing—he had been passed over in promotions and had even thought of changing his occupation—that a nervous fear seized him the moment he took up a pen. Before beginning to write he would make a number of nervous strokes with the pen without touching the paper. There was no trouble whatever in his speech.

The patient was sent to me by Dr. W. S. Thomas of New York City with the suggestion that it might be a case of stuttering in penmanship and that the methods

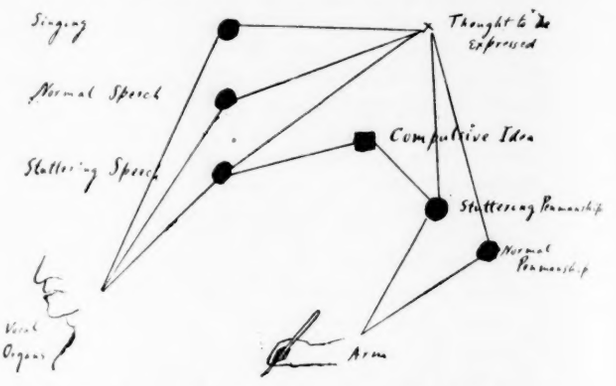

Fig. 2.—Scheme to show the nerve action in stuttering.

used for correcting the speech stuttering might perhaps be applicable. The diagnosis was undoubtedly correct. There were cramps of the muscles of action resulting from a compulsive nervous fear that was aroused whenever the action was contemplated.

The therapy was based on the theory of stuttering that had substantiated itself for sppech. The stutterer

Fig. 3.—Specimens of alphabet devised for this patient.

speaks in a peculiar voice that betrays him to the practiced ear even when he does not stutter. This voice is connected with his compulsive idea, namely, with the thought that he is going to stutter (Fig. 2). He does not stutter when he sings because the compulsive idea is not connected with singing; and he does not stutter when he speaks a dialect, for the same reason. To cure the trouble he is taught to use a form of speech that is utterly new to him, namely, the speech of normal persons. As soon as he understands how normal persons inflect their voices with rising and falling melody, and

* Read before the New York County Medical Society, Mar. 22, 1909.

can imitate them, he can speak without stuttering. His voice is changed from a harsh cramped one to a melodious easy one.

Applying this principle to the penmanship stutterer, I sought a method of imparting thought by written characters that would involve graceful and easy movements of the right arm and hand. This method had to be entirely different from penmanship and yet capable of gradual change to it. Chinese writing brushes were bought. These made it possible to use free and graceful movements of the arm. A new alphabet had to be devised in order to have no connection with the pen alphabet.

For the letter A it was explained that the Egyptians had used an inverted bullock's head; for B they had used an outline of a two-story house; C was the symbol of the crescent moon, and so on (Fig. 3). All the letters were thus regarded as hieroglyphs and felt to be new things. In this way a new means of communicating thought was built up which was quite disconnected from the compulsive fear. The patient was trained to write the letters with the brush until he could make them gracefully and quickly. Then he passed to words, using specially the names that he had to write in his business.

When he could write gracefully with the brush he passed to a pen and drew the letters in a similar fashion. Gradually the speed was increased and greater fluency obtained.

It was constantly impressed on the patient that he was writing in an entirely new way. He learned to know that he could write perfectly and fluently in this way. Any new form of writing might have been used, but this particular form was chosen so that the final result would not differ from the usual style of penmanship.

It is essential that the stuttering patient shall always feel that he is writing or speaking in a new way; so long as he has this feeling he will be free from the compulsive idea. The mere supposition that he is speaking in a new way is often sufficient to instantly stop stuttering in speech. One patient could not dictate to his secretary. To avoid discovery by his superiors he would write his letters in long hand and pass them to be typewritten. I told him to sing various letters to me. He could do so perfectly without hesitation. But he was unable to distinguish one note from another, and instead of singing —as he supposed—he really only spoke the words in a kind of monotone. I sent him back to his secretary with the instruction to always sing his correspondence, knowing that he really would not sing them but that so long as he believed himself to be doing so he would have no trouble.

This principle of training a patient to use an entirely new set of thoughts and movements in accomplishing an act that has become disturbed through nervous troubles may be applicable in still other diseases possibly in the various phobias. It is certainly closely related to the Fraenkel treatment for locomotor ataxia.

87 Madison Avenue.

Port Wine Stains.—In reply to a remark of Sir Frederick Treves, that radium can cure "port wine" stains and the query as to what other available means surgeons have for the same object, Dr. John Donald of Glasgow (*Brit. Med. Jour.*, April 3, 1909) says that for five years he has been using the *x*-rays for that purpose with remarkably good results.

THE COUNTY SOCIETY

L. ROCK SLEYSTER, M.D.
APPLETON, WIS.

The success of the state and national organizations must have as its logical basis a healthy condition of its constituent parts, the county medical societies. They are the units, and all permanent advancement and improvement is directly dependent on their condition. Increase the interest attendance and enthusiasm of a single county society, and a notch has been gained for the whole. The enthusiasm is mildly contagious. The glow of a live healthy society can not but have a beneficial effect and act as a stimulus on its neighbors. Too little attention has been given to the county society, the difficulties against which it must struggle and the ways and means of solving and meeting them successfully. This is a subject of vital importance and deserving of a most thoughtful consideration.

Now for the county society, its joys, its sorrows, and its needs. Let us study it for a moment under the low power before we try the oil immersion. We find a few counties containing a large or medium-sized city. The county society here practically becomes a city society. Conditions should be ideal. Members can easily reach the place of meeting without any great sacrifice of time or comfort. The advantages of all that is modern, the hospital, the clinic, the laboratory, the keen competition of bright minds—all form an ideal environment for active scientific work, and there is no excuse for other than a prosperous organization. To those in charge I recommend the use of a serum for the toxins of the diplococci of jealousy and the bacillus of indifference. I believe this treatment will cover the majority of their ills; and we will devote our study to those societies in the large majority whose troubles are real, whose members we find scattered over a large territory, often living ten to thirty miles from the place of meeting. With them, to attend a meeting means a sacrifice of time and comfort—often a long drive over bad roads in cold or rainy weather. Given a county with fifteen to thirty physicians and sometimes more—often no more than three in any one town—and the problem of holding successful meetings becomes one which demands no small amount of study. It is to this study that this paper, in a modest way, is devoted and aims to arouse your interest. Now for the high power!

THE REQUISITES FOR A SUCCESSFUL MEETING

First, what is a successful meeting of a county medical society? I do not wish to belittle the value of the papers read, or the study for which their preparation and discussion is directly responsible. Far more important, however, than the actual program rendered is the securing of a good attendance. I hold that a well-attended meeting of a county society has been a success if the members have done no more than to eat a good dinner and play "pedro." They have met in a friendly way, have learned that after all they are all "good fellows," have laughed over and settled little differences, and have gone home with a kindlier feeling toward the neighbor who occasionally "gets into my territory," and a mental resolution to attend the meetings more faithfully in the future. As to the article on "Diphtheria" read by Dr. White of the east end of the county, or the article on "Surgery of the Gall Bladder" read by Dr. Black of the county seat, they were good, showed careful preparation and served the purpose of

a healthy review. They awakened new interest in the subjects, but, the members have an abundance of literature on this subject at home, probably the same from which Drs. White and Black culled their information, and these papers will be forgotten long before the pleasant remembrance of a competitor's hearty handshake, or the contagious laugh of Dr. X., who has been mentally despised all these years on hearsay evidence. That little misunderstanding with Dr. Y. about the Smith case has been explained. Y. was not wrong after all; and Dr. Z. is not making calls to Browntown for three dollars as has been persistently rumored. The fraternal and brotherly feeling has been raised from zero to a pleasant summer heat; "for its always fair weather when good fellows get together." Get your men together and you need not worry about the rest. It is the problem of getting attendance that needs more study just now than any other feature of organization work, and I have failed to find a single column devoted to this subject in any of the organization publications. The whole success of the county medical society—its very life and usefulness—depends on a good attendance, and the attendance depends almost as directly on the most important man in the whole organization—the county secretary.

THE COUNTY SECRETARY

So here's to the county secretary! Your work as such means a sacrifice of time you have planned for something else, and a constant study of local conditions. Often in your efforts to smooth a rough path, to substitute harmony for friction, it will mean casting your pride aside. Your efforts may be appreciated and they may not,—but at the end of the year, when your report is ready for the state secretary, there is a world of satisfaction in knowing that your society has shown a gain, that it compares well with its neighbors, that there has been an awakening of interest and fraternal feeling and that your work has shown results. This is from one who knows.

Regarding the choice of a county secretary: he need not be your brainy man, your most successful man or your best speaker. These are qualities of lesser importance. Pick him rather for his interest in the work and his record of attendance. He should be a popular man, well liked and respected, and in whom confidence is felt, a man with both energy and tact. With these qualities he will be a success. The greatest difficulty which his duties present will be in the matter of securing good attendance. It is far easier to secure a good membership roll than to get your men out regularly to the meetings. The average physician is forgetful and a bit careless about these matters and needs a considerable amount of "stirring up" and numerous reminders. This work naturally falls on the secretary.

The practice of the majority of societies in notifying members is to send a printed form post-card with blanks left for the date and place of meeting. I have found this alone a very unsatisfactory method. It does not bring results. The card is recognized at a glance, creates no lasting impression and in the press of work is soon forgotten. More than one notice should be sent and when this is done the post-card may be used as the initial. It is better to send this about a week or ten days before the meeting. A few days later it is my custom to send a short personal letter urging the member's attendance, giving an outline of the program and business of the meeting, and reminding the member of clinical material, etc. In addition to this, let him receive a postal the day before the meeting. This need only be a line ("Lest you forget" or "Last call") with the secretary's signature. Of course this means work, but the results are so surprisingly good that one feels well repaid. When these measures have failed to get a man's attendance for two successive meetings, it is well to telephone him the night before the third. The secretary who can make each member feel that his presence is sincerely desired and that his absence will be noted and be a source of disappointment, has discovered the magic key that unlocks the door of indifference and allows the better growth and development of a fraternal conscience.

To obtain the best results there should exist between the secretary and members a cordial relationship devoid of all formality. In every way possible a return to the frank open good fellowship of college days should be fostered and encouraged. An occasional informal letter to the members is of value. Not for its literary value or because I regard it as a model, but rather to illustrate what I mean I append a letter sent to our members the first of the year.

My Dear ———:

You are hereby appointed a "Royal High Barker" for the county medical society for 1909. Your duties are: to attend every meeting, bring all of your agreeable neighbors and those you want made agreeable—even if force is necessary. You are also to bark for the good of the society, throughout the year. Personally, I am offering a golden crown and a halo to every man who does not miss a meeting in 1909. Now's your chance, if ever! Cordially yours,

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And every man is "barking" as evidenced by a 75 per cent. attendance at a night meeting held soon after. This meeting was held at a village where but one member lived, the remainder coming by team or train distances ranging from eight to twenty-two miles, and returning the same night. And the month was March!

THE PROGRAM.

A few words about the program. It should be made up at the beginning of the year, subjects assigned, places of meeting named and dates decided. Let it be printed, even though your society numbers no more than ten members. Arrange your meetings at the more central points and choose your dates carefully. Let me illustrate, and remember I have in mind the country society. Hold a morning meeting at your county seat during the county fair or races or other carnival events, and make a holiday of the afternoon. You will be surprised at the attendance. Hold a picnic or outing meeting at a neighboring lake in June or July. Make this an all-day affair. Bring the wives and don't forget the fishing tackle. This "outing meeting" is "the event" of the year in our society. It has never been the means of developing a specific for anterior poliomyelitis, but it is mighty good treatment for the friction and discord so general among medical neighbors. At one or two meetings a year try to provide an outside speaker, a man doing special work, or even a layman on a semi-lay subject. When possible, end each meeting with a good dinner or lunch. It is simply wonderful the way a kindly feeling and a good fellowship will develop around a dinner-table, and the differences and misunderstandings of years will roll away in the fragrant smoke of an after-dinner cigar.

To secure a good attendance, it is important that the program be of interest to the general practitioner and of practical value. Do not overlook the common everyday subjects. They, as a rule, will awaken the greatest interest in the general practitioner, will prove more effectual in securing his attendance, and will bring about a more general discussion, with a host of valuable suggestions and ideas learned in the hard school of experience. Let me outline, as an example, what I would consider an ideal year of practical work for the average county society holding quarterly meetings, a program to appeal to the general worker and to draw his attendance.

FIRST MEETING.—SUBJECT, "HERNIA."

Two papers, one operative, one non-operative treatment of the common hernias. (A near-by surgeon may be secured to read the first.)

SECOND MEETING.—SUBJECT, "FRACTURES."

Two papers, one on fractures of the upper and one on the lower extremity. (General discussion, each member describing and illustrating any particular or original method or appliance with which he has been successful.)

THIRD MEETING.—SUBJECT, "HOW WE CAN INCREASE OUR OFFICE PRACTICE." (OUTING MEETING.)

First Paper: "The General Practitioner as a Specialist." What can he do successfully that he now refers to the specialist. (What eye and ear, surgical, mental patients, etc., can be treated successfully at home.)

Second Paper: "Mechanical Therapeutics, Gynecologic and Genitourinary Treatments."

Third Paper: "The Dispensing of Medicines."

Fourth Paper: "The Physician as a Busines Man." Keeping of books and records, investments, collections, etc.

FOURTH MEETING.—SUBJECT, "PEDIATRICS."

Two papers, one on the examination of sick children, one on pediatric therapeutics.

This was found to be a most successful year's program. It covers a wide field; soars over no man's head; is very practical; and, most important, is of vital interest to the private soldier, "the man behind the gun;" and it brings out a wealth of discussion and helpful practical ideas learned in the school of actual practice.

CONCLUDING SUGGESTIONS

In closing, just a few more words about the county secretary, for more depends on him than on any other: I believe his attendance at the state meetings to be as important as the delegate's, for he knows best the pulse of his society. Could the number in the house of delegates be doubled, he would be a most valuable addition. Of still more importance, however, would be a yearly meeting of the county secretaries presided over by the state secretary. This would provide means for an exchange of ideas, a chance to "talk things over," to "get in touch," and would be of inestimable value to themselves and to the organization as a whole. Where this has been tried it has been enthusiastically endorsed, and it should be more generally adopted.

One more suggestion: It is that the official journals of the various state and national organizations give one or two pages each issue to the county secretary, and let it be edited by a man in the field. Let this space be turned over to them and let it be a clearing-house of ideas open to any and all, to the man who has originated an appeal for membership or collections, has worked out a good program, is in doubt and has a question, or has a suggestion on any branch of society work. Progressive manufacturers have installed in their plants a "suggestion box." Into this all employés are invited to place written statements of any suggestions or ideas for improvement. They have found these ideas of the men actually doing the work of the utmost value. Let this journal page be a "suggestion box," and let every man engaged in the work be invited to contribute to it.

So here's to the man in the field, the man with the big hand and the big heart, the man who is bumping over country roads to do his part! His faithful attendance merits much, and one who knows him well, crowns him "the prince of good fellows."

A DISORDER DUE TO EXPOSURE TO INTENSE HEAT *

* Read before the Pittsburg Academy of Medicine, March 23, 1909.

WILLIAM H. CAMERON, M.D.
PITTSBURG

Dr. David L. Edsall, of Philadelphia, has recently described[1] a group of cases characterized clinically by violent muscular spasms and excessive irritability of the muscles. Dr. Edsall says:

These patients presented none of the conditions ordinarily recognized as due to heat; there were, indeed, no symptoms of any moment, aside from the extremely striking muscular disturbance. The muscular spasms, however, were of a remarkable character, and in some of their details they appeared to be sufficient to distinguish the cases from other conditions of spasm that are recognized whatever their cause.

One of the most striking features was a very conspicuous degree of fibrillary contraction, particularly in the muscles of the calf. This was of continuous occurrence, except during the frequent interruptions caused by the most marked of all symptoms, namely, severe tonic spasms.

Without going into further detail Dr. Edsall mentions, in this report, which he calls a preliminary one, the following points:

The spasms lasted from half a minute to a minute each time they occurred and were exceedingly painful.

They involved the muscles of the forearms and legs severely, but were also violent in the abdominal muscles.

The spasms occurred spontaneously with great frequency, but were at once excited, in the intervals of quiet, by any attempt at voluntary use of the muscles.

The spontaneous spasms were almost entirely over within twenty-four hours and no symptoms remained except slight exhaustion and some muscular soreness.

Sensation of all qualities (touch, temperature, etc.) was normal, as were the sphincters and pupils.

In summing up, Dr. Edsall says:

This disorder appears to be, therefore, a condition that is likely to be met occasionally in the course of a general medical experience and one that occurs in a considerable number of occupations with sufficient frequency and severity to be of very distinct importance. I was able to make some studies of metabolism which includes observations of the urinary excretion of total nitrogen, ammonia, uric acid, chlorids, phosphates, sulphates, etc. The conditions of metabolism that I found were extremely striking; they have, as far as I know, no counterpart in any other condition and are very different from any that have been observed in somewhat similar states of spasm. At present I would mention that the conditions of metabolism, together with the clinical features, indicate that it is an individual disorder, and it seems extremely probable

1. THE JOURNAL A. M. A., Dec. 5, 1908, li, 1969.

that it is due to an acute degenerative process in the muscles.

During the past five or six years I have had opportunity to see a number of cases such as Dr. Edsall has described, and have always felt that such cases must surely be of a distinct type, for the most striking objective symptom did not seem, as far as I could see, to be connected with, or dependent on, any other pathologic condition.

At first the condition puzzled me, and, although it is a well-known and exceedingly common condition among certain classes of millmen, I was unable to find, in ordinary medical literature, any mention of the subject, or to find a description of any condition or disease that would satisfactorily cover the peculiar symptoms presented by this class of patients.

In speaking to some of my medical friends, I was further surprised to learn that they had either never seen a case or, if they had, did not recognize it as a distinct condition, and had never given it any special thought or attempted to classify it other than to use the common term, "mill cramps." This term, by the way, is one that millmen commonly apply to all cases of sudden painful seizures (whether associated with muscular spasms or not) occurring while they are at work.

Being unable to find any authentic description or explanation of the condition, I tried to investigate the matter, principally in order that I might develop, for my own satisfaction, a more rational line of treatment. My investigation, however, was greatly hindered by the very unfavorable circumstances under which I saw my patients.

It was absolutely necessary that they be removed, as soon as possible, from their unfavorable and often intolerable surroundings. I have never found it necessary to send these patients to the hospital where they could have been studied to a better advantage and, unfortunately, I was unable to follow up the cases after the patients had been taken home. Consequently my remarks are necessarily limited to what I have observed regarding cause, diagnosis and perhaps immediate treatment.

My first concern was, of course, to be sure that the most prominent and characteristic feature, "myospasm," was a condition and not a symptom. I found this comparatively easy, for, no matter how severe the spasms, how long they lasted, or how painful they were, the patient's mind always remained clear and the special senses not affected. Another point is that only the large voluntary muscles were affected, and still another point was the fact that there did not seem to be any constitutional disturbances whatever.

The differential diagnosis might, therefore, be summed up as follows: In all other conditions, such as strychnin poisoning, epilepsy, uremia, hysteria, etc., presenting muscular twitchings, contractions or spasms, such twitchings, contractions or spasms are, as a rule, in proportion to the amount of toxemia or morbid condition present. Now, if this toxemia or morbid condition (whatever its character) were present in sufficient amounts to cause the intense myospasms present in these cases, then surely it would be present in sufficient amounts to affect all the voluntary and at least some of the involuntary muscles, and to materially affect the mental, nervous or circulatory systems. That this condition differs from all other recognized conditions due to exposure to heat is shown by the fact that there is absolutely no thermal disturbance.

The next point was to determine the possible cause, and, in looking up this point, I found some very interesting and almost unbelievable facts.

It was first noted that in somewhat over 2,000 calls to attend men, either sick or injured, in and about mills and railroads, not one case of this character was found, unless the patients had been exposed to intense artificial heat. It was also noted that the season of the year had an effect only, perhaps, in so far as the humidity affected heat radiation, for, while most of my cases did occur in the hot summer months, I have notes of cases occurring in October, January, April and May.

This fact, naturally, led to the belief that exposure to intense heat was a factor. The question then came up as to just what degree of heat was necessary.

On investigation I found that all my cases, ten in number, occurred in men who had been working in temperatures ranging from 140 to 235 F. This statement, perhaps, needs some explanation, for, to one who is not acquainted with some conditions found in mills, it would, no doubt, seem almost impossible for men to work in a temperature above the boiling point.

Now, when a furnaceman lifts up the door of an ordinary steel heating furnace, he is exposed, for a greater or less period, to a mass heated to 2,800°, and when a furnaceman engaged in melting crucible steel lifts out a pot he is directly over a mass heated to 3,000°. One can imagine what the surrounding temperature of such places must be, especially when no provision has been made for the free circulation of air.

On the floor, or rather the roof, of a crucible steel-melting furnace it is hot enough at all times to broil a steak; and, remember, it is on this floor that the men have to do most of their work. The men working here wrap their feet and legs in two or three thicknesses of water-soaked cloth, and I have seen them after perhaps a half-minute's exposure come away with these water-soaked cloths dry and even burning. Needless to say that, in this special class of work, the men are actively engaged only about half an hour out of a possible two hours.

The manager of such a department is my authority for the statement that the surrounding temperature on his melting floor will, very often, in summer reach 235.

In going a little deeper into the cause, I found that these men, while exposed to this intense heat, were also obliged to use extraordinary muscular effort. In fact, they were obliged to lift, pull or push a load weighing from 50 to 350 pounds.

It was noted that the attacks came on after the men had been working for some time. Men on the day turn would be attacked toward the close of the morning's or afternoon's work, and the night-turn men about midnight. It was further noted that the attacks came on, not while the men were actively engaged in violent muscular effort, but shortly afterward. A man would be putting on his coat, or walking away from the furnace, or engaged in some other form of light muscular effort, when, usually without warning, the first spasm would seize him.

From these facts one would be inclined to think that overexertion was at least a factor in the causation, and inquiries as to a possible predisposing cause would seem to strengthen this view.

Most of the cases occurred in men who were hard drinkers, although there was absolutely no evidence to show that any one of them had been even slightly in-

toxicated when attacked. Some of them stated, without being able to give any definite symptoms, that they "had not been feeling just right." One patient, who does not use alcohol in any form and who, by the way, has had two attacks, stated that on both occasions his "stomach had been out of order for two or three days previous to the attacks." In fact, in all cases observed I found some more or less definite condition which led me to believe that the muscular tone of the individual was either not equal to or had been lowered to a point somewhat below that which he found necessary to meet the ordinary requirements of his particular line of work.

In this connection it might be as well to state that one attack seems to predispose to others. This is a common observation among millmen, and my observations bear it out.

That I was, perhaps, mistaken in my idea as to a certain susceptibility, or predisposition, and that my estimate of the temperature necessary to bring about the condition was entirely too high, is shown by the fact that Dr. Edsall reports a case of a man who was attacked while walking along the street on a hot summer day. This man's occupation, however, made it necessary for him to be constantly walking about the streets, and it is just possible that his muscular tone was greatly below par.

Like Dr. Edsall, I have never found any thermal change. The pulse is somewhat accelerated, but not more than one would expect in patients suffering intense pain.

Besides the intense muscular spasms, pain is the most marked characteristic feature. I make this statement because I have never seen agony such as these men, apparently, suffer.

The entire length of the acute, violent, spontaneous seizures, with the corresponding periods of quiescence, may be anywhere from one to four hours, when there is a gradual lessening in the severity and frequency of the spasmodic seizures. The patients may have fleeting spontaneous attacks for twenty-four hours but the tendency is for a more or less rapid recovery with some slight muscular soreness resulting. This observation, however, is based only on patients whom I have had under treatment during this period. How long these patients would suffer under the common lay treatment of vigorous massage and large doses of whiskey is rather hard to say.

I have never seen the muscles of the face, neck or back affected. The spincters remain unaffected and I have never had a case in which I thought that the involuntary muscles were involved. I have been informed, however, that some men have seen fatal cases and this fatality has been due, they say, to "spasm of the heart muscle."

As to the pathology, I was unable to form an opinion. One would imagine, after seeing these patients at the height of an attack, that surely there must be some striking pathologic condition present. The intense spasmodic and more or less constant muscular contraction, and the severe pain would certainly seem to go hand in hand with some marked changes in metabolism, but the comparatively rapid and complete recovery, with apparently no serious consequence, makes one think that whatever changes have taken place must be of a transitory character.

At first, I thought that there were some marked changes in the blood; a deoxidization or a degeneration of the red cells in the local superficial vessels. This idea was suggested by observing the behavior of the muscular system in patients who have been overcome by furnace gas; a phenomenon which is observed, I believe, only during the very beginning of the inhalation. One can hardly see, however, how this phenomenon could occur locally without affecting the general circulation. Dr. Edsall informs me that he found absolutely no change in the blood, and this, coming from such a careful observer, clears up, as far as I am concerned, any doubt as to this point.

Central motor disturbance was out of the question because of the local manifestations in rather widely separated groups of muscles, and because the spasms, in the groups, occurred, not simultaneously, but one after the other until all the affected parts were involved. This phenomenon occurs so rapidly, however, that one is liable to imagine that the groups are affected simultaneously.

Superficial nerve disturbance as a hypothesis is untenable, because, if the nerve endings had been the seat of the primary lesion, there would have been constant pain.

Unfortunately, I have never been able to obtain a section of muscle for microscopic examination (as far as I know such an examination has never been made), so I am unable to confirm Dr. Edsall's pathologic conclusions except by clinical exclusion.

The treatment in these cases has caused me no little concern. Quick relief of pain is clearly necessary and, in most of my cases, I have not been able to give relief soon enough to satisfy either the patient or myself.

A general anesthetic would seem to be indicated, yet I have never administered chloroform or ether because I make it a rule never to give an anesthetic when the patient has just been undergoing hard manual labor, unless it is absolutely necessary, for I have found that in nearly all such cases the result is bad. I have tried all the antispasmodics, and without effect. I have also pushed the hypodermic use of morphin just as far as I have thought advisable (the more experience I acquire in surgical and medical emergency work, the more conservative I become) and have had to wait for a rather extended period before I had my patients comfortable enough to be taken to their homes.

In one case a very mild interrupted current, generated by the magneto in an old telephone instrument, which was the only electric current convenient, was applied during the quiescent period, and, while it immediately started up a spasm, continued application seemed to shorten it and also to lessen the pain. I tried this application in three cases and these patients certainly recovered more rapidly than any of my former ones. It seems unreasonable, however, to believe that it could have been other than a coincidence, for it is entirely inconsistent to apply an excitomotor to an already contracted muscle.

The fact that Dr. Edsall has found that there is an entire absence of the chlorids in the urine should certainly give a clue to the future treatment.

My reason for selecting this subject was that the article in question is the first I have ever seen on the subject. It has given me a clearer insight into a condition which I recognized as being distinct but could not classify, and because I might, possibly, add a few points from my clinical experience.

There are a large number of men who have been in my position; men who have and will see a number of cases and these men, no doubt, will be stimulated to investigate a subject which, heretofore, has escaped scientific thought and which, until the recognition and preliminary classification by Dr. Edsall, was practically unknown to the medical man at large.

Now that investigation has been started, we may hope for better things in the way of effective immediate treatment and, perhaps, better still, for some method by which millmen may be protected from excessive non-radiated heat—to my mind the undoubted cause of this acute form of suffering.

4210 Butler Street.

A CASE OF POISONING FROM THE BITE OF A RATTLESNAKE

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Few cases of poisoning by the bite of a rattlesnake have been observed by competent investigators with means at their disposal for a careful clinical examination, and for this reason, if no other, the case herein reported is of interest, but even this data is brief compared to what might have been accomplished had we known as much of venomous poisoning at the time of the accident as we do at present. Heretofore the information at our disposal has been chiefly deductions from animal experimentation, and, while in the main correct, fails to convey the bedside picture so necessary for a perfect conception of a case. The individual who is unfortunate enough to have suffered such an accident is rarely in close proximity to a hospital or laboratory, and a study of the patient is attended with difficulties that are quite apparent.

Patient.—R. R., male white, aged 50, attendant at Zoological Park.

History.—He has been a man of temperate habits, using alcoholic stimulants in moderation. From 1884 to 1900 he followed the sea for a livelihood, but for the past eight years he has been employed as an attendant at the National Zoological Park, detailed at the reptile house. It was while following his morning routine that he met with the accident which makes him the subject of this paper. August 17, while cleaning the cage in which five diamond rattlers (*Crothalus adamatens*) were confined, his attention was distracted momentarily. He had the lid of the cage raised and his hand resting on one side, the hand being partially in the cage and about three feet from the snakes. He felt a sharp prick on the middle finger of the left hand, proximal phalanx, and knew intuitively that it was the bite of a rattler.

Treatment.—He immediately sucked the wound and another attendant tied a string snugly about the finger, proximal to the injury. Within fifteen minutes, the wound was freely incised by Dr. Baker, superintendent of the park, and cauterized with 1 per cent. solution of potassium permanganate The digit was cyanotic and edematous from the ligature. There was entire absence of constitutional symptoms until the ligature was loosened, three-quarters of an hour after it was applied. An hour later a marked change occurred. From a tranquil and comfortable state he became much depressed physically, as indicated by cold sweat, thready pulse, nausea and sanguineous emesis. His condition became so grave that an ambulance was summoned and the patient conveyed to a hospital, not, however, before he was given 1/30 grain of strychnin hypodermically and large quantities of distilled water. One of his associates gave him two small drinks of whiskey.

Course of Disease.—On admission to the hospital, he was given strychnin gr. 1/30 hypodermically and a similar dose of the drug was ordered to be continued every three hours and continuous proctolysis instituted. The bladder was emptied by catheter and irrigated with salt solution. His temperature on admission was 99, pulse 120, respiration 26 and blood pressure (Riva-Rocca) 87.

Blood examination: Red blood cells, 4,600,000; white blood cells, 14,440 hemoglobin, 95 per cent., coagulation time 7½ minutes.

Urinalysis: Orange color, turbid, sp. gr. 1019, acid, flocculent sediment, albumin positive, sugar negative, urea 3 grains to the ounce. Microscopic examination showed (centrifuged) few granular casts, few pus cells, cell débris and epithelial cells.

General Symptoms: The skin was pale and moist, pupils were dilated but responsive to luminous impressions, and consciousness was retained. He complained of great pain in the hand and arm, and below the wrist the extremity was swollen and purpuric. In the course of a few hours an extravasation of blood appeared at the inner side of the elbow, followed by purplish streaks in the forearm, corresponding to the course of the ulnar and radial vessels. The discoloration did not disappear on pressure. The axilla was soon the site of similar chromatic phenomena, with little involvement of the arm. The swelling in the entire arm was noticeable. At 4 p. m. (approximately six and a half hours after the accident) he vomited eighteen ounces of bloody fluid. The hand was dressed with 1 to 1000 solution of bichlorid of mercury. The bleeding was free and soon penetrated the gauze. He slept for ten minutes between 5 and 6 p. m., and for a few shorter periods during the night. He was restless and frequently complained of pain in his abdomen. Twitching of the feet and hands was reported at 9 p. m., but the strychnin was continued in the same dosage. The salt solution was not well retained. At 11 p. m. 1 gram of Calmette's antivenomous serum was injected in the loose skin below the axilla, and it seemed to be absorbed quickly.

Second Day: First nourishment was given about 12:45 a. m. and an hour and a half later the man vomited blood-stained curds. He slept a few minutes in every two or three hours, and the twitching was well marked. The left side of the thorax anteriorly and posteriorly and the neck became swollen, indurated and purpuric, giving the picture of enormous contusions. Milk was given at 5:15 a. m. and coffee at 7:30 a. m. and immediately after the latter was taken the man vomited sixteen ounces of coffee-colored liquid. He expelled much of the salt solution, but it was estimated that he absorbed thirteen and one-half pints in less than twenty-four hours. Nourishment was suspended after the emesis. The swelling of the entire arm and forearm had become intense, with much interference with the circulation as determined by the coolness of the surface, but the radial pulse was retained. Blebs as large as pigeon eggs appeared on the limb, irregularly distributed. The hand was redressed owing to saturation of the dressings with blood and serum. No bleeding point was seen, only an oozing. The whole arm was swathed in moist bichlorid of mercury dressings. Blood examination (eighteen hours after patient was bitten), red blood cells, 4,000,000, white blood cells, 16,000, hemoglobin, 75 per cent., blood pressure, 100.

Third Day: The patient slept but fifteen minutes in the previous twenty-four hours, the wakefulness being probably due to both the pain and the strychnin. It had been necessary to catheterize him every eight hours until this time, when he became able to void urine. He vomited curds of milk at 12:45 a. m., 1:30 a. m. and 2:40 a. m., but without visible blood. Nausea was almost a constant symptom. All the salt solution was not retained. The arm was dressed with ichthyol ointment and the finger with bichlorid of mercury solution. There was practically no further involvement of the superficial tissues, the edema and extravasation remaining unaltered, except in the abdominal area, especially on the left side. His bowels moved during the afternoon, the first time since the injury. Nourishment was allowed, consisting of coffee and small quantities of milk. He had been decidedly more comfortable. His highest temperature in the twenty-four hours was 100.6, highest pulse rate 124, highest respiratory rate 24.

Blood examination: Red blood cells, 4,000,000; white blood cells, 15,000, hemoglobin, 60 per cent., blood pressure 110. The red cells show vacuoles, and slight crenation. There was no free pigment. Urinalysis: Amber, sp. gr. 1020, acid, flocculent sediment, slight trace of albumin, sugar negative, urea ten grains to the ounce. Microscopic examination (centrifuged), granular casts, pus cells, squamous epithelial cells and mucus.

Fourth Day: During the previous twenty-four hours the patient slept two hours in all. He was allowed solid food at this time, and seemingly enjoyed soft egg and toast. The sanguineous discharge from the finger continued and the hand and arm were redressed. He said that the pain in the hand did not abate. It is not an exaggeration to say that the limb appeared to be nearly double its normal size, with scarcely a spot of healthy skin visible. To the touch it was brawny and cool. On the inner aspect of the right arm, bluish mottling was noted. He spent an uneventful day, but rather more comfortable than the preceding ones. While the anemia was striking, withal his general condition had improved, his pulse rate being lower and his temperature hovering close about 100 F. Blood examination: Red blood cells, 2,800,000, white blood cells, 14,000 hemoglobin, 60 per cent. The disintegration of red cells was more marked than on the previous examination. There was slight crenation and many microcytes; poikilocytosis was noteworthy; blood pressure was 125. Urinalysis: Amber, acid, flocculent sediment, trace of albumin, sugar negative, urea seven grains to the ounce. Microscopic examination (centrifuged), few pus cells, few squamous epithelial cells.

Fifth Day: The man was slightly irrational during the night previous, and got out of bed for a moment. The extravasation had extended almost over the entire right side of the chest and back as low as the crests of the ilia. He was rational at 9 a. m. and ate a breakfast of egg, milk-toast and coffee. The salt solution was fairly well retained, but he expelled from 1 to 2 pints at long intervals. He perspired freely and had a dark brown stool. The arm was redressed owing to an accumulation of discharge on the gauze. His highest temperature in the previous twenty-four hours was 102.6 F. Urinalysis: Amber, 1010, acid, no sediment, no albumin, no sugar, urea, seven grains to the ounce. Microscopic examination (centrifuged), few leucocytes, few squamous epithelial cells.

Sixth Day: He slept several hours during the preceding night and was comfortable during the day. The arm was redressed. The swelling and discoloration had not extended. The wound was ragged and necrotic, the finger cold, bluish black and anesthetic. The salt solution and strychnin were permanently discontinued. The highest temperature in the previous twenty-four hours was 101.4, highest pulse rate 108, highest respiratory rate, 24. He had been entirely rational, generally comfortable and had a splendid appetite. The paleness of the skin and conjunctivæ were noticeable and that he had lost weight was readily seen. Blood examination: Red blood cells, 2,000,000, white blood cells, 12,000, hemoglobin 45 per cent. Urinalysis: Amber, 1009, slight sediment, no albumin, no sugar, urea four grains to the ounce. Microscopic examination (centrifuged), few leucocytes, few squamous epithelial cells.

Seventh Day: He slept the entire night of Aug. 22-23. His only complaint was pain in the back of the neck. The arm was redressed as usual. The swelling had not increased, and the discoloration remained stationary in extent and degree. Administration of two Blaud's pills, three times daily was begun.

Eighth Day: The night of August 23-24 was the best he had had, and the long sleep seemed to have refreshed him. The swelling in the arm had diminished, but the circulation in the finger seemed insufficient. He was allowed to sit up for a few minutes. The arm was redressed. Blood examination: Red blood cells, 2,480,000; white blood cells, 11,000; hemoglobin, 60 per cent. Urinalysis: Amber, 1014; acid, slight sediment, no albumen, no sugar, urea six grains to the ounce. Microscopic examination (centrifuged), pus cells, cell débris, urates and a few squamous epithelial cells.

Tenth Day: The patient had rested comfortably and gained strength in the previous two days. His appetite was good, he slept well and he sat in a rolling chair. The condition of his back and chest was not materially changed.

Eleventh Day: There was no change in the previous twenty-four hours. Blood examination: Red blood cells, 2,800,000; white blood cells, 10,800; hemoglobin, 60 per cent. Urinalysis: Amber, acid, slight sediment, no albumin, no sugar, urea eight grains to the ounce. Microscopic examination (centrifuged), few pus cells, few squamous epithelial cells, amorphous urates.

Sixteenth Day: The swelling in the arm and chest was somewhat less, and the discoloration lacked the intenseness of the early period of the illness, except in the arm and forearm, where the pigment had not undergone any absorption. The finger was nearly mummified except at the seat of the wound, where the tissue was sloughing. Hemoglobin estimation, 65 per cent.

Twenty-second Day: The finger was amputated at the metacarpophalangeal joint under local anesthesia. The swelling of the chest and abdomen was much less, and the discoloration was subsiding. There was a bluish-black pigmentation about 1½ inches in diameter near the left acromion process, and a greenish-yellow spot near the left clavicle and nipple. On the inner aspect of the left arm the extravasation was as deeply tinted as ever. The swelling of the arm had subsided but the arm was still swollen and indurated from the attachment of the deltoid to the finger tips. The affected arm measured 12½ inches in circumference at a point midway between the axilla and the elbow. At a corresponding point on the right arm, 11¼ inches was the circumference. The lobe of the left ear, which was pricked for a blood drop on the day of admission, became extravasated with blood at the time and remained so until this date. The lobe of the right ear from which blood was subsequently drawn, showed no discoloration at any time.

Thirty-third Day: The man had gained in weight and strength, but withal was much below normal. The forearm and arm were still slightly indurated and had a few discolored areas. The finger did not heal by first intention, but discharged pus and required daily redressing. He was discharged from the hospital at this time, but advised to return at intervals for observation.

December 1: The man returned to the hospital on this day for an examination of the blood, which was as follows: Red blood cells, 3,588,000; white blood cells, 9,000; hemoglobin, 87 per cent. He has continued Blaud's pills and his anemic appearance has been supplanted by a good complexion. He was much stronger and had been at work for several weeks. The finger had not entirely healed.

Without entering into an extended discussion of the entire subject, a brief summary perhaps would be of interest.

The poisonous snakes are of two general species, the *Colubridæ* and the *Viperidæ*, both with many subclasses. The cobra of India is of the former type, while the rattler is an example of the viperine. The toxic effects of the venom of the *Colubridæ* are manifested by general malaise, slight local reaction, late capillary hemorrhage and paralysis of the respiration, in marked contrast to the viperine venom, which causes an extensive local lesion which almost always results in gangrene, hemorrhages in the mucous membranes and effusions in the serous cavities.

The venom enters the wound by a groove or canula in the fang, communicating by a duct with a maxillary gland in which the poisoning is stored. The sac is ensheathed in muscle, contraction of which expels the venom. The amount which may be collected when the reptile strikes usually varies from 1 to 3 cm. with much variance in toxicity. Calmette found that immediately

after moulting or after a prolonged fast the venom was ten times more active than after a plentiful meal or before the moult. It is estimated that 1 gm. of the cobra venom will kill 165 adults. It is to toxalbumins or, more accurately, protoalbumoses and heteroalbumoses that the properties of venoms are essentially due. *Colubridæ* venoms pass slowly through vegetable membranes and with great difficulty through animal parchments. The viperine venoms are not dialyzable and when heated to 72 C. become almost inert. The venoms of *Colubridæ* destroy the coagulability of the blood, asphyxia supervenes and the death struggle is brief. The venoms of *Viperidæ*, on the other hand, produce violent local changes. Injected into the peritoneum of an animal, there is an enormous afflux of sanguinolent serosity; the capillary vessels of the serous membranes immediately become distended, allowing the blood to filter through their walls, and the animal succumbs in a few hours. The hemolytic action of the venoms of *Viperidæ*, especially the rattlesnake, is very weak. A wide range of differences is exhibited by the various venoms as regards the hemolytic power in the presence of normal heated serum. If cobra venom be added in increasing doses, hemolysis augments up to a certain point, beyond which the destruction of corpuscles shows progressive diminution. The leucocytosis is much more intense and rapid with cobra than with rattlesnake poisoning.

If the therapeutic measures which we possess could be applied promptly in each case of poisoning by the bite of a venomous snake, the mortality would be much lower than the present, from 25 to 40 per cent. The venoms are partially neutralized by ammonia and by potassium permanganate, but the best chemical antidote is 2 per cent. solution of the hypochlorite of lime, which will immediately and surely destroy the venom by contact. When possible to apply the ligature proximal to the wound, we have a means which controls the intake of venom, but endangers the viability of the member so constricted. Calmette states that Halford's method, injection of ammonia near the wound, is worthless, and that Mueller's, free stimulation with strychnin and generous feeding, is no better. In this case, the Mueller treatment was instituted at the suggestion of Dr. Charles Wardell Stiles, of the Hygienic Laboratory. Animal experiments certainly confirm all that Calmette has claimed for his serum, antivenine.

The dose of antivenomous serum is 10 c.c. of the liquid or 1 c.c. of the dried preparation, dissolved in 10 c.c. of warm sterile water and injected under the skin where absorption is rapid, regardless of the location of the bite. In desperate cases, injection may be made into a vein or the subcutaneous dose may be trebled. The time that elapses between the infliction of the wound and the use of the serum bears a definite relation to the efficiency of the serum; as little time as possible should be lost in employing this valuable agent.

The case herein reported may be used by the Mueller school as an argument in favor of that particular treatment, and likewise it may be a source of comfort to the Calmette followers to know that the patient recovered after the use of the serum; A Mueller[1] states:

> Cases may occur in which the quantity of strychnin required to subdue the symptoms and to be injected in a few hours may amount to a poisonous dose, but to urge this as a reason against the use of it is—to say the least of it—puerile, since the two poisons neutralize each other, the strychnin not causing muscular spasms until it has completely disposed of the snake poison.
>
> To inject in urgent cases one-sixth, in mild cases one-twelfth, of a grain every half hour until the effects of the snake poison are entirely removed, is perfectly safe practice which none who follow it will have cause to regret.

Calmette[2] says:

> "Neurotoxin being the essentially active substance in venoms, and that to which the dangerous properties of poisonous snakes as regards man and domestic animals are especially due, it is the effect of this that it is most necessary to prevent. Consequently, the first quality that an antivenomous serum ought to exhibit in order to be capable of being used in the therapeutics of poisoning is the possession of an antineurotoxic power as high as posible. This antineurotoxic power is easily obtained by employing cobra venom for the fundamental immunization of the horses destined for the production of the serum. Antineurotoxic serum thus prepared shows itself perfectly capable of preventing all effects of intoxication from cobra bites, which are much the most frequent in India. In the same way it shows itself sufficiently efficacious with regard to colubrine and viperine venoms, the neurotoxic activity of which may cause death. But as it does not possess any preventative action upon the local effects or hemorrhagin, to which the noxiousness of certain viperine venoms—such as those of *Lachesis*—are almost exclusively due.
>
> In countries in which *Viperidæ* are very common we must therefor not confine ourselves to vaccinating animals that produce serum solely against the neurotoxin of cobra venom, for instance; we must prepare these animals, after having immunized them to cobra venom by injecting them with progressively increasing doses of the various venoms derived from snakes that are most frequently met with in the district.
>
> Nothing, moreover, is easier than to train animals vaccinated against cobra venom to tolerate strong doses of the venoms of *Lachesis, Vipera russellii, Crotalus, Hoplocephalus or Pseudechis*. In a few months we succeed in obtaining serums very active against these different venoms.
>
> Utilizing the horse as producer of antitoxin, I have prepared by this method polyvalent serums capable of preventing the local action of viperine venoms, and of suppressing *in vitro* their coagulant and proteolytic effects on the blood."

Calmette's serum can be purchased in New York and Chicago and should be employed in every case possible. When the serum is not immediately available, the strychnin treatment is the best substitute.

1. Australasian Med. Gaz., Sydney, 1888-9, viii, 41, 209-210.

2. Venoms, Venomous Animals and Antivenomous Serum Therapeutics. 1908, p. 250.

Clinical Notes

NECROSIS OF THE LIVER AFTER CHLOROFORM ANESTHESIA*

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It is not so much for its statistical value as again to call the attention of the profession to the dangers of chloroform as an anesthetic that this case is reported.

Patient.—Male, aged 19, weight 152 pounds, student, reared on a farm, good habits.

History.—Previous history is negative, except that the patient was subject to attacks of "indigestion" from childhood. He had an attack in February, 1908, which was diagnosed as appendicitis. At that time there was decided tenderness in the right iliac region over the site of the appendix, some elevation of temperature, and rigidity of the right rectus muscle. After an interval of about two weeks, the patient apparently recovered from this attack and returned to school. On April 16 of the same year he was awakened early in the morning by severe pain in the abdomen, followed shortly

* Read before the Rochester Pathological Society, Feb. 18, 1909.

by vomiting and diarrhea. There was nothing in the diet of the previous day adequately to explain this illness. The vomiting and diarrhea continued until about 7 a. m., shortly after which he was seen by his family physician, Dr. F. A. Wicker, of Livonia, N. Y. At this time there was no elevation of temperature and the pulse rate was 84. Severe pain and marked tenderness to slight pressure were present throughout the abdomen, but most marked over the appendix. By the next morning, April 17, the symptoms and signs of the disease had apparently abated somewhat and the patient seemed to have improved except for a slight elevation of temperature and pulse rate.

Operation.—The patient remained in this condition for the next three days, when he was operated on by Dr. Becker. An opening was made through the right rectus muscle and an abscess, thoroughly walled off, was found in the region of the appendix, containing about eight ounces of foul-smelling pus. The appendix was removed, the pus carefully wiped out and drainage inserted. The anesthetic used was chloroform and the amount employed did not exceed one-half ounce. It was administered by a thoroughly competent anesthetist, and the course of the anesthetic and the operation were uneventful, not occupying more than half an hour.

Postoperative History.—The patient recovered from the anesthetic promptly and was conscious within fifteen minutes. He apparently did well until the third day after the operation, his temperature at no time going above 100 F. and the pulse rate varying between 80 and 90. There was free drainage from the wound, no distention of the abdomen and no vomiting. There was an absence of pain. On the morning of the third day, however, his pulse dropped to 66, his temperature then being 99.2 F. About noon he was noticed by members of his family to act in an irrational manner, and apparently he did not recognize his mother. This was the first indication of mental disturbance. About two hours later acute mania developed, and it required the combined efforts of several persons to restrain him. One-eighth grain of morphin was administered hypodermatically at intervals of about two hours until the following afternoon. This served partly to control the mania. From that time he remained passive, lying on his back, pulse increasing in rapidity and becoming weaker and the temperature gradually rising. He passed urine involuntarily at intervals of about three minutes. After lying in this condition for several hours tonic convulsions developed which were most marked in the arm muscles. This was followed by coma and Cheyne-Stokes respiration. These symptoms became more and more profound until his death, which occurred five days after the operation and about forty hours after the first indication of any mental disturbance. At the time of the operation there was a slight yellow tinge to the sclera. This jaundice became general and at the time of death was rather noticeable.

Urine: After the operation two examinations of the urine were made. The first specimen was of acid reaction, specific gravity 1025; sugar and albumin absent. The second specimen contained trace of albumin, but in other respects was the same as the first.

Autopsy.—Permission to do a partial postmortem was obtained and was performed on the following day by Dr. Williams—about twenty-four hours after death. In deference to the wishes of the family, only the abdomen was examined. No attempt at embalming had been made. The body was that of a young male, fairly well nourished, slight, general jaundice. In the right iliac region there was the incision of the recent operation, about 6 cm. long, closed by sutures and containing a drainage tube. The edges of the wound were clean and presented to the eye nothing abnormal. The abdomen was opened in the median line, the omentum was free and apparently normal. A completely walled-off sac about the size of a lemon, made up of old adhesions, was found in the right iliac region. This sac was empty, clean and practically odorless. The peritoneum, both parietal and visceral, to the naked eye, was apparently normal. The kidneys and adrenals, pancreas and spleen, were carefully examined and presented no evidence of important pathologic change. The gall bladder and bile ducts showed very little evidence of inflammatory trouble—in fact, the liver was the only organ in the body that exhibited signs of disease, but even the changes in this organ to the naked eye were not particularly striking. It was smaller than normal and weighed approximately 1,350 grams. Its surface was smooth. The capsule was slightly wrinkled and of normal thickness. Inflammatory adhesions were absent. The liver substance was pinkish-gray, and was softer than normal. On cutting, this softening was particularly noticeable and the friability was increased. The cut sections were yellowish-gray. There was but little bleeding. Some portions were distinctly mottled. There was very little discernible change in blood vessels or bile ducts. The lobules were made out with difficulty or not at all. Sections were made of the kidney, spleen, pancreas and liver. The liver alone presented evidence of marked change.

Microscopic Appearance: This was in striking contrast to the macroscopic appearance. The lobules were smaller than normal and were indistinctly defined. The liver cells were practically all necrotic. Occasionally, a lobule would be found in which the change was less evident at the periphery than in the central part. A fat stain was not used. The kidney section showed slight cloudy swelling, otherwise was negative.

Bacterial Examination: Stab cultures in plain agar were made from the various organs examined, including the peritoneum and abscess cavity. With the exception of the latter, all were negative. In the abscess cavity was found a mixed culture of bacilli and cocci—their identity, however, was not established.

Urine: About 50 c.c. of turbid, dark brown urine was aspirated from the urinary bladder and examined. Tests for sugar and bile were negative. Albumin was present in small amount. There was a distinct odor of acetone and a marked reaction was obtained with dilute ferric chlorid solution, suggesting the presence of diacetic acid. Microscopic examination showed a few blood cells and a few hyalin casts.

The history of the case, together with the postmortem findings, led us to attribute the death to necrosis of the liver, which we believe, in the absence of other explanation, to be due to the toxic action of the chloroform used as the anesthetic. It seems proved that chloroform can cause death in either of two ways: first, after the manner more commonly understood, by its depressing and paralyzing action on the respiratory center; and second, by its destructive action on the liver. In the former case, the amount of the drug used and the concentration of the dose bear a relationship to its toxic action and the time of death, which is immediate. In the latter instance, its toxicity is due to its action as a protoplasmic poison on the liver cells and the death, which is delayed for several hours, or even days, results, as has been reasonably explained by Wells,[1] from the perverted metabolism of that organ. Neither the extent of the destruction nor the degree of the toxicity seem to bear any relation to the amount of the anesthetic used or to the method of administration. Rather the chloroform seems to act as a fulminating agent for the marked, perverted katabolism of the liver cells, in which the liver not only fails to detoxicate the poisonous products of metabolism that are brought to it by the blood stream, but it undergoes a process of self-destruction or autolysis, and it is the combined poisons of these two perversions of function which directly induce death.

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1. Arch. Inter. Med., vol i, p. 589.

Surgery of Peritonitis.—The wise surgeon never forgets that the diaphragmatic zone is the danger area of the peritoneum and should not be interfered with in general septic peritonitis unless it is itself the seat of primary infection, as in perforation of gastric ulcer of the lesser curvature.—G. A. Bingham, *Saskatchewan Medical Journal*, January.

CASES ILLUSTRATING THE PSEUDOPARALYSES OF EARLY CHILDHOOD

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If a large number of sick children be observed it will be noted that apparent paralysis is not rare. In the absence of signs of the causative disease, it will be difficult to exclude true paralysis, such as anterior poliomyelitis, the cerebral palsies, various spastic paralyses and other less common diseases of the nervous system. My case records show that these cases group themselves in three classes:

I. THE PARALYTIC SYMPTOMS OF RACHITIS

Thomas and Furrer,[1] in their article reviewing one hundred cases of rickets, stated that 40 per cent. of infants and children in the hospital class between the ages of 6 months and 2 years have rickets. Morse, of the Infants' Hospital, Boston, showed that 80 per cent. have the characteristic lesions of the disease. One becomes convinced, therefore, that few institutional infants escape rachitis; and I have observed that a large number of dispensary babies are likewise afflicted. Although rickets is a disease of the poor, due to the influence of bad surroundings and bad feeding, it may occur in well-to-do families, where, however, the physician sees the case earlier and the disease is not allowed to go on to the gross changes observed in the neglected cases.

The impairment first noticed is the failure of the child to begin or to keep on walking. In more severe cases, there is complete non-use of the legs and arms; when this so-called paralysis precedes the osseous changes as it commonly does, the case may closely resemble a true paralysis. The muscles of the back and legs become affected by the disease and lose their tone, the ligaments are relaxed. This is as much a characteristic feature as are the nervous and bone changes. Physicians frequently see infants who are unable to hold up the head long after the proper age, and who can not sit erect, due to muscular weakness in the neck and back. There are no distinctive pathologic changes[2] in the muscles which, under the microscope, look pale and their fibers are infiltrated with fat; sooner or later, these muscles will show atrophy from disuse. If the child does not begin to walk at the normal age, about 24 months, a pathologic cause should be looked for.[3] It matters not whether the baby developed the disease early and has never been able to use its legs, or whether, as a later manifestation, there has been a cessation of walking. In either case, the same differentiation from true paralysis must be made. Holt[4] states that he has seen expert diagnosticians unable to exclude poliomyelitis except by the electrical reactions. The reaction of degeneration is absent in rickets; it is also absent in cerebral paralysis; that measure, therefore, does not aid in the differentiation of rickets and cerebral palsy. The latter condition, however, has increased patellar reflexes, cerebral symptoms and spasticity of the legs.

CASE 1.—J. T., male, aged 2, white. Father and mother have always been well, and are of the prosperous farming class. Four other children are all well.

History.—The patient had whooping cough at the age of two weeks, lasting six weeks, and summer diarrhea at eight months, when cutting first tooth. He began to walk at one year of age. He has all his teeth now. At the age of 21 months the parents noticed that the right leg was "crooked"—markedly knock-kneed—while the left leg was straight. The child began to show a disinclination to walk and in a few weeks stopped walking and would not even stand by holding on to a support.

Examination.—When I first saw him he was 2 years old. The head circumference was 19¾ inches; anterior fontanelle was not closed; intelligence was normal; chest was funnel-shaped, rosary present; there were enlarged epiphyses at wrists and ankles. He was pot-bellied, usually constipated. Weight, 22 pounds; temperature, 99 F. He could move his legs in all directions, but ordinarily refused to do so; he would not stand or walk. There was some atrophy of the leg muscles. Reflexes were present.

Remarks.—The child had been nursed for the first 18 months, but since then (6 months) he had been fed exclusively on boiled cows' milk as he liked it boiled and did not care for other food. Two months later I saw the child after he had been taking an antirachitic diet and he was standing on his legs by holding to a chair.

CASE 2.—C. A., male, aged 22 months, white, American. Family history good, no syphilis.

History.—The child weighed 8½ pounds at birth and nursed 14 months. He began to talk at 10 months and was beginning to walk when, without any apparent illness, he refused to stand or to walk even with assistance. Since then he had made no effort to walk, though he crawled and move his legs in all directions.

Examination.—The head circumference was two inches more than the average; the teeth had been decayed since their eruption; the abdomen was unduly prominent, and rosary was present. Wrist and ankle epiphyses were enlarged. He sweated at night about the head. Since weaning he had been continuously on condensed milk modified with water. The electrical reaction showed no paralysis. Reflexes were diminished; muscles were flabby; no foot drop. Intelligence seemed normal. When last seen the child was beginning to walk.

Out of thirty-three undoubted cases of rachitis seen in my dispensary and private practice in the past two years, these two cases belong to the class that stops walking after once beginning. The other class of cases, in which a pseudoparalysis exists but the child has never attempted to walk, does not vary essentially from the description of the above cases.

II. PARALYTIC SYMPTOMS OF SCURVY

It is not rare for scurvy and rickets to coexist. Koplik and Holt quote statistics from the American Pediatric Society showing that 45 per cent. of scorbutic patients gave undoubted manifestations of rickets, and that most of these cases coming to autopsy showed the gross changes of rickets. This leaves 55 per cent. of patients without symptoms of the disease. Whether or not rickets coexists, a pseudoparalysis or immobility of the legs occurs as the most common symptom of scurvy. In twenty-six cases of scorbutus tabulated by Starr,[5] in twenty-five there was complete immobility of the legs, and in one it was only partial. Of these 26 cases, 24 showed swelling and enlargement of the legs or thighs; 24 of the 26 infants had cut teeth, and showed scorbutic changes in the gums, while the 2 who as yet had no teeth, possessed normal gums. The spongy gums are present only in infants who have teeth.

The apparent paralysis is a refusal of the child to move the legs due to pain in some cases, due to epiphyseal separation in others. It is at first simply voluntary; later the legs may become helpless. In 184 cases

* Read before the Kansas City Academy of Medicine, March, 1909.

1. Cleveland Med. Jour., December, 1907.
2. Rotch: Text-book of Pediatrics, fifth edition.
3. Guthrie: Functional Nervous Diseases of Childhood.
4. Holt: Diseases of Infancy and Childhood, fourth edition.
5. Diseases of the Digestive Organs in Children.

reported by Holt, all but 2 involved the legs, only 2 the arms alone, and 42, both the legs and the arms. Paralysis of the arms alone is therefore rare and when present it resembles syphilis. Tuttle[6] states that the false paralysis of scurvy is of a spastic, not flaccid nature. The limbs are flexed because that is the more comfortable position. Sometimes the atrophy is extreme, is present over the entire body, and is not confined to the arm or leg which is the subject of the diagnosis. The electrical reactions show no paralysis; reflexes may be diminished or lost. The swelling which is present in the bones is fusiform, and is responsible for the extreme tenderness and pain. These two symptoms help to differentiate scorbutus from poliomyelitis. Antiscorbutic treatment usually effects prompt and complete cure, of course with no residual paralysis. The history, cachexia, and hemorrhages beneath the skin and periosteum, and the inflammatory evidences around the epiphyses complete the usual symptomatology of scurvy. The following case is typical except that there were no apparent hemorrhages of the skin.

CASE 3.—Baby S., aged 2 years, white, in extreme poverty and filthy surroundings. Parents were afraid to give the child fresh air for fear it would catch cold. Dentition was normal. The child had been fed for two years on boiled cow's milk. It had been sick for six months. The family first noticed that the child cried when handled. Some of the teeth were loose at time of the examination, and the gums were blue and swollen. The arms and legs were so tender that to keep the child from crying it was carried on a blanket. Apparently it could not move its limbs. In two weeks, under the administration of fruit juices, the helplessness disappeared.

III. SYPHILITIC PSEUDOPARALYSIS

My records show that out of four infants of 3 months or less, having early hereditary syphilis, three were brought because of apparent paralysis; in two instances both arms were involved, in the third the legs. The phenomenon that usually accompanies this pseudoparalysis is an enlargement of the distal end of the bone due to an osteochondritis, specific in nature. This occured in my cases at the lower ends of the humerus and the tibia. The symptom of uselessness of the limb may occur with or without epiphyseal separation, (Tuttle[6]). There is also periostitis, which causes pain and sensitiveness from handling. The condition does not usually exist at birth. In my cases all the infants were normal at birth and developed the immobility at varying periods in the first few months. There are no evidences of real paralysis; the mother notices that the child has stopped moving the limb, and the facts that the infant cries on handling and that in thin subjects swelling is discovered leads the family to believe that the limb had been broken from careless lifting, or from a fall. The evidences of degeneration in the muscles is wanting. In fact, it will be observed that the child can move the limb, but evidently pain causes it not to. Antisyphilitic treatment gives diagnostic results as does the Wassermann reaction, which I have not yet tried. I wish to report one case belonging to this class of pseudoparalysis of the new-born.

CASE 4.—Baby E., girl, aged 2 months, white, American parentage. Mother had had no miscarriages, nor had she had other children. No syphilitic history was obtainable. The baby had had several series of eruptions, which the mother called hives. At the age of 6 weeks the right arm became helpless; four days later the left arm also became helpless. The mother then noticed swelling at the elbow. The child could move its fingers and could hold up its arms when once raised. It cried when handled or undressed, though it nursed well.

Examination.—This showed a well-nourished infant, arms motionless, swelling above both elbows, motion at elbow joints caused crying. The soles of the feet were covered with flat, dry papules. Temperature was 100.2 F. Daily administration of 20 grains unguentum hydrargyri was effective. Motion returned in a few weeks. Tumor, pain and rash disappeared.

Syphilis as a cause for never beginning to stand or walk is shown in the report of the next case. This child was only 16 months old and might yet have begun unaided to walk, yet the fact that it could not even stand, coupled with the history, shows that the condition was pathologic.

CASE 5.—C. L., negro, aged 16 months. The mother had had the initial sore at the age of 16 and was never treated. The child was nursed at the breast. There were no evidences of rickets. There was a rash on palmar and plantar surfaces at the age of three months followed by enlarged glands and linear ulcers of the lips. He had seven teeth, wide apart and small. At the time of examination there were rhagades in both corners of the mouth. There was a large scar from a chronic ulcer over the sacral region. He had made no effort to walk or to stand. Intelligence seemed normal. He could move legs in all directions.

Treatment.—Bichlorid of mercury gr. 1/200 was given three times a day, and was followed by rapid disappearance of the sores. At last examination the child was beginning to walk.

CASE 6.—This boy, W., aged 5½ years, was much older than the children usually suffering with pseudoparalysis from syphilis. The father had a long standing fetid nasal catarrh; the mother had large chronic ulcer of the face, pronounced syphilis by Dr. Sutton. She had one child which had snuffles and rash, dying at three weeks of age. The patient's milk teeth were all present but had always been bad. He had been delicate since birth and during first few months had an eruption, which the mother called eczema. For several weeks before I saw the child he had been crying at night with pain in both knees. One week previous to examination he fell to the floor—a trivial accident—and was thought to have injured his knees. He had since refused to walk, and showed pain on attempted motion of knee.

Examination.—Reflexes were normal. Knees were apparently somewhat enlarged; he held them flexed and did not attempt to move them, but the loss of motion was only voluntary. Cervical and inguinal glands were enlarged. He had interstitial keratitis, according to Dr. Kimberlin and other oculists who have examined him.

Operation.—Administration of iodids gave no improvement, neither did inunctions of mercury. Under large doses of protiodid of mercury, grains 2 daily, the symptoms rapidly disappeared, and six months later he had gained six pounds in weight and was walking normally.

CONCLUSIONS

1. Pseudoparalysis is not rare in rickets, scurvy, and syphilis.

2. When it is the earliest symptom noticed in these diseases diagnosis is difficult. Other evidence should be looked for.

3. It would be hard to group three other such serious conditions of childhood which have so favorable an outcome under early treatment.

Altman Building.

6. Carr's Practice of Pediatrics.

A Liberal Education.—The content of learning, the method of instruction, the beauty and force of intellectual atmospheres, religion, the studying of the student, the personality of the teacher, all and each are the forces and conditions which help to make the liberally educated man, and therefore help to constitute a liberal education.—C. F. Twing, *Am. Acad. of Med.*

TWO CASES OF SUPPOSED TRAUMATIC HERNIA

W. H. ALLPORT, M.D.
CHICAGO

The following cases appear of sufficient interest to warrant record as illustrating instructively two weak points in the practice of surgical diagnosis: (1) The easy thoughtlessness with which the ordinarily wide-awake surgeon falls into the habit of either allowing the patient to make his own diagnosis or of carelessly perpetuating the diagnostic errors of his predecessors; (2) the willingness with which the average surgeon accepts the doctrine of "traumatic" hernia, without ever so much as considering the possibility of error in the diagnosis of either hernia or trauma.

CASE 1.—*History.*—A. B., aged 28, railroad station helper, a tall, lanky, unhealthful looking countryman with indefinite family history; while between a heavy baggage cart and a train, was contused in the left groin and back. There was moderate disturbance in both regions, with no important objective symptoms, and he remained at home for three days. In about four weeks he discontinued work and consulted a surgeon in his home town in southern Illinois for a small swelling in the same groin. The swelling was not glandular, was partly reducible, and was apparently a sacculated structure not identical with any of the anatomic elements of the groin. The surgeon made a diagnosis of traumatic hernia, advised a truss, and a suit for damages was instituted, based on a supposed connection between hernia and accident. The patient wore the truss but a few hours, discarded it on account of pain, and went to another physician, who applied a spica and a soft pad, confirming the original diagnosis. During the subsequent four months this individual saw eleven more medical men who concurred in the diagnosis of traumatic hernia, but were not allowed by the attorneys in charge of the case to operate. He was, however, furnished with several written opinions setting forth the fact of the hernia and its traumatic origin. Meanwhile the defendant in the suit was comforted by the assurance of two of its surgeons that "the hernia was a pretty bad one." After four months the patient felt so much pain that he came—against the advice of his attorneys—to Chicago, where he accepted the offer of operation tendered by the defendant. Prior to the operation, which I was instructed to perform, he was seen by two surgeons, who accepted the diagnosis of hernia. In this diagnosis I incontinently concurred, although I agreed with another surgeon that the hernia was "a queer one."

General Examination.—The patient was rather emaciated; had been in bed or reclining for some time before his journey to Chicago; and was examined—not very carefully, it must be admitted—in bed, prior to operation. He was in the hospital thirty-six hours, during which time the following observations were made: Urine normal; no vomiting; tongue clear; bowels moving normally; leucocyte count 10,000; temperature, a. m. 99, p. m. 100.

Local Examination.—The patient was inclined to lie on the opposite side with knee and thigh slightly flexed to relax tension. The abdomen was rather tense but not distended. In the left groin just above the middle third of Poupart's ligament was a flattish, tender mass, not discolored, capable of partial reduction but returning immediately on removal of pressure, about the size and shape of a *Bent water-cracker*. The mass appeared softish, giving an indistinct fluctuant feel, but was surrounded by a "rind" of harder material, apparently the result of chronic inflammation. On percussion, the mass gave out a note which appeared tympanitic and suggested adherent bowel near the internal ring. One of the examining surgeons suggested that the hernia was of the properitoneal variety, and that the flattened shape was due to the insinuation of omentum between the layers of the inguinal structures.

Operation.—The usual incision for inguinal hernia showed the "rind" to be composed of inflammatory exudate, and a deeper incision through the "rind" opened a large psoas-pelvic abscess containing cheesy pus without blood. The pus originated from an ulceration of the third or second lumbar vertebra, had burrowed into the pelvis *via* the psoas sheath, had pushed the peritoneum up and back, to point, finally, external to the deep epigastric artery behind and through the structures composing the middle part of the inguinal canal.

CASE 2.—*History.*—C. D., Polish laborer, aged 26, who spoke no English, fell down an elevator shaft, fracturing the right leg, contusing and lacerating the right thigh subcutaneously, and contusing the sacral region. The sacral contusion resulted in an enormous hematoma, from which later on was evacuated about three pints of blood. The patient was not vomiting, and his bowels were moving.

Examination.—In the left inguinal region, 1 to 2 cm. above the inner third of Poupart's ligament, was a hardish mass, non-tympanitic, irreducible and non-fluctuant, about the size of an apricot, tender and slightly discolored at its most prominent part. There was no impulse on coughing. The mass was painful, and the patient denied that he had ever had any previous trouble at the point in question. This case was brought to my notice as a "traumatic hernia" and was regarded as such by several surgeons who had previously examined it. I am not a believer in traumatic hernias and therefore made a most careful examination with a view to excluding either traumatism or hernia. It was impossible to exclude local traumatism, since convincing positive evidence was present in the form of ecchymosis. Although there was no bowel disturbance, and the swelling was recent, was not tympanitic, was quite rigid and irreducible, it was impossible to exclude hernia on account of the location and shape of the swollen mass. Although in doubt, I ventured the tentative diagnosis of old contused omental hernia of the direct variety without bowel contents. The operator's original diagnosis was femoral hernia. Although the swelling was above Poupart's ligament, this diagnosis was quite possible, since it is a well-known fact that certain femoral hernias, after emerging in the usual manner, turn upward to lie on or above the ligament. Prior to operation the operator altered his diagnosis to hematoma of unknown origin—a safe opinion in view of the ecchymosis.

Operation.—A cautious incision over the swelling opened into a torn and bloody mass of muscular tissue which proved, after the incision was extended across the ligament into the thigh, to be the lacerated and upturned distal end of a proximal fragment of the adductor longus, that muscle having been torn completely asunder by the violence of the fall.

85 Rush Street.

A SIMPLE STAIN FOR BLOOD SMEARS (TIEDEMANN)

JEROME E. COOK, M.D.
ST. LOUIS

There are certain requirements which a blood stain must fulfill in order that it may be of use in the general routine work of the practitioner. It must be capable of quick and easy preparation; it should keep indefinitely; it must possess absolute simplicity in its application; and it must act quickly and reliably at all times. If, besides possessing these necessary qualifications, it may be used for other purposes—for staining pus, sputum, etc.—its value is so much enhanced. Despite the many modifications of the Jenner-Romanowsky stain which have from time to time been proposed, none which has come to my notice so admirably answers the above requirements as the one described about three years ago by Dr. E. F. Tiedmann.[1] Those who have used this stain have soon discarded all others for their routine work, and I feel that its value has been so thoroughly demonstrated in the rather limited circle in which it has been known and used, that I am war-

1. Quart. Bull. Med. Dep. Washington Univ., December, 1905.

ranted in bringing it more prominently to the attention of the profession. The technic of its application is still simpler than that of the Skelton stain so highly recommended by Hayhurst[2] recently. The stain is prepared as follows:

a, A 1 per cent. solution of methylene blue (Höchst, medicinally pure) in pure methyl alcohol, and b, A 1 per cent. solution of eosin (Grübler, pure) in pure methyl alcohol are kept on hand. Equal parts of a and b are mixed, and the stain is ready for immediate use. This is a saturated solution of the stain and I have found it better to dilute this with one-quarter to one-half its volume of methyl alcohol. It is also advisable to make up only enough of the mixed stain to last four or five weeks as it is needed, on account of the evaporation of the alcohol which will take place if the stock solution is frequently opened. If kept corked, however, the mixed stain keeps indefinitely, one sample which I made more than four years ago being as good to-day as the day it was made. Especial stress must be laid on the purity of the ingredients, particularly the methylene blue.

I recommend that only the Höchst, medicinally pure, be used. This can always be had from E. Leitz, Chicago and New York, if not elsewhere. The ordinary brands of methylene blue do not give good results. Merck's methyl alcohol, the brand marked "Highest Purity," has proved entirely satisfactory and is easily obtainable; the ordinary methyl alcohol must not be used. The bottles must be chemically clean and dry before using, and must be kept tightly stoppered.

TECHNIC

The stain is particularly adapted for cover-glass preparations. For staining blood the film should be thin, even, air-dried, and preferably not more than twenty-four hours old. No heat fixation is necessary. The cover-slip, held in a good cover-glass forceps, is flooded with the stain by means of an ordinary medicine-dropper. This dropper should be kept separate, should never be used for any other purpose, and should not be washed. The stain is allowed to act for one-half to one minute and is then slowly washed off with distilled water added drop by drop, preferably with another dropper kept aside for the purpose. If a deeper stain is desired, (and I prefer this second technic) the stain should be allowed to act for one minute, then five drops of distilled water added, and this allowed to stand for two or three minutes, and then washed with distilled water. The film should be stained pink. Under the microscope the red cells appear pink, the nuclei deep blue, the neutrophile granules light pink, the eosinophile granules deep pink or bright red, the basophile granules a deep purple, the blood platelets a light blue, malaria plasmodia and bacteria blue. Polychromatophilic stippling is very well shown.

For staining pus, throat smears, sputum, and other exudates the stain should not be allowed to act more than one minute. It is an excellent stain for the gonococcus and the ordinary pus cocci. For staining the diphtheria bacillus I have long ago discarded the Loeffler's blue in favor of this stain. The stain should act from one-half to one minute and shows the metachromatic granules most beautifully.

I can most heartily recommend this stain for all ordinary routine blood work, and for most of the other usual stained preparations. No other stain which I know of is so simple in preparation and application, gives such uniformly good results, and has such a wide range of usefulness.

2. Hayhurst, Emery R.: A Satisfactory Method for Staining Blood Smears, THE JOURNAL A. M. A., April 3, 1909, lii, 1100.

A CASE OF BRADYPNEA IN ADVANCED PULMONARY TUBERCULOSIS

CHARLES M. MONTGOMERY, M.D.
PHILADELPHIA

History.—The patient, M. H., aged 18, single, was a clerk. His uncle died of lung trouble over thirty years before. The patient was never very strong, but considered himself healthy. He had had a cough for five winters, and steadily for a year past. The cough was worse since an attack of the grip six months before the patient was seen by me. He had typhoid for eleven weeks two years before he was seen. He was seen for the first time May 5, 1908. His chief complaint was anorexia. He had cough, expectoration (2 ounces), moderate dyspnea, occasional palpitation of heart, no hemoptysis or night sweats.

Examination.—His weight was 133 pounds (138 a year previously), his height 5 feet 11 inches. (He had grown one foot in five years). His temperature was 100.5, pulse 104, respirations 10 to 12. He appeared a little childish for his age, his emaciation was marked, his chest long and flat, expansion poor. The heart showed marked accentuation of second pulmonic sound, otherwise normal. The lungs were extensively involved, practically all of the left lung being involved; also the right upper lobe, part of the middle lobe, and the upper part of the lower lobe. There was a small cavity at the right apex and a large cavity in the left upper lobe.

Course of Disease.—The patient improved temporarily. In September he developed an ischiorectal abscess, which ruptured. The urine about this time was acid; specific gravity 1010; considerable albumin; no diazo reaction; no sugar; many leucocytes; a few dark granular casts and a few epithelial cells. Four days before death the pulse was 112, respirations 13. The patient was remarkably free from pain in chest or abdomen. There were no signs of meningitis. Practically the only drugs use were strychnin, creosote and iodin (locally). The patient died Nov. 13, 1908. No autopsy was obtained.

Respiration.—The respiratory rate per minute out of eight times recorded by myself during the last six and one-half months of the patient's life was 10 once, 11 once, 12 three times, 13 twice, and over 20 once. The respirations were regular, quiet, slow, fairly deep, and unaccompanied with any effort or strain. The patient's mother kept records of the respirations during the last three months of his life, 165 in all. She was intelligent, careful, somewhat familiar with hospital work, and her recorded respiratory rates averaged a little higher than my own. Her and my records together made 173, divided as follows: Respiratory rate per minute: 10, 1 time; 11, 2 times; 12, 41 times; 13, 20 times; 14, 81 times; 15, 22 times; 16, 4 times; 17, 1 time; over 20, 1 time. The rate ranged from 10 to 17, with only one exception. It never rose above 15 with but six exceptions. It was below 15 145 times (83.8 per cent.). The afternoon and evening rates averaged a little higher than the morning rates. The temperature was usually low in the morning, often rising later in the day to 100 or 102.5. The pulse varied between 104 and 132.

Hutchinson gives the normal respiratory rate as 16 to 24. Bradypnea or a diminished respiratory rate has been noted in some forms of cerebral disease, including meningitis, in affections involving the pneumogastric nerves, in respiratory obstruction, in some forms of bronchitis, in asthma, in emphysema, and in nephritis, none of which appear to have been the cause of the lessened respiratory rate in our case.

Out of 1,438 occasions on which the respiratory rate was recorded in nine patients with advanced pulmonary tuberculosis during the last three months of life, on

about two thirds the rate ranged between 25 and 34 inclusive, and only on one occasion was it below 20.

The only reference to diminished respiratory rate in pulmonary tuberculosis I have been able to find after looking over a number of standard works, is one by Smith[1] in 1856. In an elaborate study of five cases of pulmonary tuberculosis he found the respiratory rate as low as 13, and speaks of the bad prognosis in cases with low respiratory pulse rates, like 1:7 or 1:8. He noticed the low rates chiefly in phthisical persons of unusual stature, as in some of the regiments of the life guards, and in the early stage. Possibly, the bradypnea in this case and the height and rapid growth may have been due to a common cause. No other cause suggests itself, the condition resembling many cases of advanced pulmonary tuberculosis.

This patient had advanced pulmonary tuberculosis and yet the bradypnea was practically always present during the last six months of life, the rate frequently being below 13 and reaching as low as 10. The respiratory-pulse ratio was low, reaching below 1:10.

1. Edward Smith, Medico-Chirurgical Trans., published by the Royal Medical and Chirurgical Society of London, vol. 39.

MIXED TUMOR OF ADRENAL ORIGIN CONTAINING OSSEOUS TISSUE

O. W. H. MITCHELL, M.D., AND R. B. HILL
COLUMBIA, MO.

Patient, Mrs. D., aged 24, American, housewife, had four sisters and two brothers, all in good health. The family history was negative. With the exception of the usual diseases of childhood the patient had always been in good health. She had three children, the youngest was two and one-half months old.

Present Trouble.—About seven weeks before the examination the patient first noticed an enlaregment in the left hypohondriac region. About three weeks later she began to have some pain in her side and back, which did not seem to be getting worse. The growth, according to the patient, had not increased in size and the only pain the patient had now was in the back.

General Examination.—A tumor mass was readily palpated in the left hypochondriac region; this extended several finger-breadths below the free border of the ribs and to the median line in front. There was very little pain on pressure; the tumor was of hard elastic consistency; there was tympany over median border of tumor. When the patient lay on the back a distinct tympany could be percussed over the tumor. The mass extended through to the back and could be palpated from the rear and pushed forward and the entire mass seemed slightly smaller than a child's head. Distention of the colon did not help to clear up the condition. The mass was freely movable with respiration. When the patient stood it was possible to palpate between the upper pole of the tumor and the border of the ribs. Otherwise examination of the abdomen was negative. On vaginal examination the uterus was normal, anteflexed and movable. The right adnexa could be palpated and were apparently somewhat thickened.

Urine Examination.—Light straw, sp. g. 1025, alkaline reaction, no sugar, trace of albumin, microscopically, many pus cells, a few red cells and an occasional cast could be seen. Second examination, same as the first, with the exception of the presence of sugar, which could be accounted for by the fact that the patient was nursing a child.

The patient again made application for treatment four weeks later. An *x*-ray plate made at this time showed a shadow, which was taken to be a stone in the pelvis of the kidney. Since patient was last seen the tumor had increased in size until now it extended beyond the median line.

Clinical Diagnosis.—Kidney tumor, probably hydronephrosis.

Operation.—By Dr. Max W. Myer. Oblique lumbar incision, tumor and kidney exposed, attempt to trocar failed. In the delivery of the tumor mass, which was very difficult owing to size and solidity, the tumor tore and yellowish bloody contents escaped. It was necessary to resect the last rib to deliver the mass.

Postoperative History.—The patient recovered from the operation, left the hospital in two weeks. To date, six months after operation, there are no signs of return.

Pathologic Report.[1]—The specimen was a tumor mass about the size of two fists, with a thick, fibrous capsule covering it, except at the lower pole, from which yellowish pulpy material protruded. When sectioned the tumor presented difficulty because of osseous or calcareous substance in the capsule, processes of which extended quite deep into the tumor mass. The cut surface presented a variegated appearance; canary yellow areas, which were taken to be the tumor substance proper; red areas, which were thought to be due to hemorrhage; and the substance so resistant to the knife which was calcareous material or possibly true bone. The starch-iodin reaction of Crofton was positive.

Microscopic Examination of Tumor.—Pieces from various parts of the tumor were taken; those from the most resistant parts were placed in nitric acid solution before being blocked. The various slides showed many variations in the microscopic pictures. The cells were much the same, large and clear, with a very large vesicular nucleus, which took a bright, clear stain. The nuclei varied greatly in size. In some areas these cells were massed together without any particular arrangement, while in others they were to be found only in strands or cords, usually double cords of cells. In other places there was distinct tubular formation, with the tubules filled with red blood cells. Many of the lining cells of the tubules were filled with pigment in the form of very minute granules and of a yellowish-brown color. The pigment was of hematogenous origin and reacted to Pearl's iron stain. Some cells gave evidence that fat had been dissolved out of them. The blood vessels, really sinuses or capillaries, were very thin-walled. The tissue, which was placed in nitric acid solution, showed, when stained by Schmorl's method, typical osseous structure. There was definite formation of laminæ and canaliculæ, and the bone substance took a yellowish-brown stain.

Pathologic Diagnosis of Tumor.—Osteohypernephroma, or better, osteomesothelioma.

Microscopic Examination of Kidney.—The accompanying kidney, which was markedly smaller than normal, firm and quite resistant to the knife, showed on microscopic examination distended tubules, many of which contained large hyaline casts; and great increase in the interstitial connective tissue.

Pathologic Diagnosis of Kidney Condition.—Fibrocystic kidney, atrophy from pressure.

We wish to express our thanks to Dr. Myer for permission to report the case.

ASPHYXIATION FROM GASOLINE FUMES

HUGH S. WILLSON, M.D.
CRYSTAL, N. DAK.

Several cases of asphyxiation in buildings where gasoline engines were being run have come to my attention lately, and I have not come across any reports of such conditions in my limited library or in medical journals.

CASE 1.—The operator of a gasoline fire engine was working in the engine house with the engine running and all doors open. After an hour or so he felt dizzy and fell to the floor, unconscious. There was marked pallor and body was covered with cold perspiration. The breathing was slightly stertorous. The eyes were closed, the pupils slightly dilated. The pulse remained full, regular and at normal rate. The patient winced on pressure at the supraorbital notch but remained unconscious for five hours. He felt weak and had a splitting headache for a

1. From the Pathological Laboratory, University of Missouri.

day after; also nausea and vertigo for two days after. He had been overcome once before under the same conditions but soon regained consciousness in the open air. There was no history or sign of epilepsy or other condition simulating this. Others in the building had the dizzy feeling and headache but reached the open air without help.

CASE 2.—A chop-mill operator disconnected the exhaust-pipe of gasoline engine and turned it into a tank of water within the building, to heat the water. After the engine had been running for half an hour the operator became extremely dizzy and was barely able to escape to the open air.

CASE 3.—A farmer placed his gasoline engine in a large barn, part of which was occupied by cattle. After running the engine for some time he noticed the stock dropping in their stalls, and was unable to get them up. He soon felt dizzy and had difficulty in reaching the open air in time to avoid unconsciousness. He had marked headache and vertigo for some time after.

In all cases the buildings were not tightly closed. In Case 1, especially, all doors were wide open, giving very free circulation of air.

OPEN-TUBE LARYNGEAL SPECULUM

E. FLETCHER INGALS, M.D.
CHICAGO

This instrument was designed to facilitate the introduction of the bronchoscope or to be used in direct laryngoscopy either for diagnosis or operations. The handle has been placed at an acute angle to the tube, a feature which is important in enabling the operator to

Open-tube laryngeal speculum.

hold the instrument firmly with the patient either in the sitting or the recumbent position. The tube is open on one side, which permits the easy withdrawal of the instrument after the introduction of the bronchoscope, yet the opening in no way sacrifices the advantages obtained by the tubular instruments heretofore employed for similar purposes, and its use is not attended by the difficulties that have sometimes been experienced in withdrawing the slide that closes the opening in some tube specula. The light is introduced along a protecting groove so that it is out of the way in operative procedures, yet it is not liable to be dimmed by secretions that might find their way into an auxiliary tube. The instrument is made in two sizes, one 14 cm. long for children, the other 17 cm. long for adults. I have found this much more satisfactory than other instruments I have used for direct laryngoscopy or for introducing the bronchoscope. It may be employed easily when the parts have been properly anesthetized by cocain and suprarenalin. It is best to make the examination or operation when there is no food in the stomach, as the throat is then more tolerant of manipulation and vomiting is much less likely to occur.

34 Washington Street.

Therapeutics

TOBACCO

In this age of the ever-increasing frequency of high blood tension, arteriosclerosis and cardiac weakness, the action of tobacco is becoming more and more a topic of importance. While it is true that the number of non-smokers among men is increasing, it is also true that the number of men, young men, and even boys, who smoke excessively is increasing.

In investigating the exact pharmacologic action of tobacco, while we must seriously and carefully consider the scientific findings of laboratory investigators, it becomes evident that these findings do not express the whole truth of the action of tobacco on the individual addicted to its over-use.

The only active constituent of tobacco seems to be the alkaloid nicotin, and this alkaloid acts principally on the nervous and circulatory system. In concentrated form it is one of the most quickly acting poisons, and may produce death in less than a minute by causing immediate respiratory failure, the heart beating for some time after respiration ceases. In less concentrated doses the symptoms are severe nausea, vomiting and purging, with profuse salivation, sweating and a gradually failing heart and respiration.

When nicotin is injected intravenously or subcutaneously there is first a rise in the blood pressure, which is probably due to an irritant action on the blood vessel walls. This, however, is soon followed by a lowering of blood pressure, due to the disturbing influence on the heart. The action on the heart varies with different doses, and often from minute to minute. At first there seems to be decided inhibitory action, by a stimulation of the pneumogastric nerves. If the dose is sufficient to paralyze the ganglia of the pneumogastric nerves the heart becomes rapid, and soon the heart muscle itself is depressed and later paralyzed. Most of the secretions of the body are increased, especially that of the salivary and sweat glands.

Nicotin is a stimulant to peristalsis, both of the intestines and stomach. Nausea and vomiting, though partially due to excessive stomach contractions, are also doubtless due to the irritant or depressant action on the vomiting center in the medulla.

Cushny says that nicotin first stimulates and later paralyzes all of the sympathetic ganglia. If this is true of large doses, small doses taken in constantly (as by smoking) by young boys must profoundly affect growth and nutrition.

The nervous twitchings and fibrillary contractions of muscles seems to be due to an action on the central nervous system. Nicotin does not seem to be a stimulant to the higher centers of the brain, except possibly during the actual act of smoking or puffing at a cigar or pipe. The almost immediate action is a depressant and quieting one on the central nervous system; in

other words, it acts as a narcotic. While large doses of nicotin will cause dilatation of the pupils, small doses (smoking frequently repeated) will cause the pupils, in the tobacco *habitué*, to be contracted.

While nicotin is mostly excreted by the kidneys, it is also largely excreted by the saliva, and probably slightly by the perspiration.

Like any other narcotic drug, a tolerance for tobacco is soon acquired, the desire for it soon develops, and the tobacco habit is easily formed.

It seems positively physiologically demonstrated that when tobacco is smoked a certain amount of nicotin is absorbed, as, whether the effect is that of acute poisoning, as in a novice, or that of chronic poisoning in the over-user of tobacco, the symptoms and disturbances are those of nicotin. The amount of nicotin that will be absorbed from each "smoke" depends on whether it is a pipe, cigar or cigarette that is smoked, and whether or not the smoke is inhaled.

What it is that causes the tobacco-smoking habit is not positively demonstrable, and perhaps the habit can not be attributed to any one particular thing. The desire for a smoke is probably a combination of the narcotic, quieting effect of the nicotin; the quieting effect of the rhythmical muscular activity of puffing; the desire for the periodic irritant stimulation of the throat, and perhaps larynx; perhaps the psychic effect of watching the curling smoke, and the human feeling of sociability in smoking with others. There seems to be no doubt that cigarette smokers who inhale have the desire intensified by the irritation of the throat, and such smokers are not satisfied with any other method of using tobacco, even if strong cigars are substituted for the weak tobacco cigarettes. Consequently, the nicotin action comprises but a portion of their intense desire, the cure of which is the hardest of the tobacco habits. It is also positively true that the smoker who inhales (and inhaling occurs far and away most frequently among cigarette smokers) is the one who absorbs the most nicotin, and is the one in most danger of chronic poisoning.

The intangible signs of chronic tobacco poisoning are in boys, impaired physical growth and impaired respiratory ability, and in older men, a slowly developing arteriosclerosis. The tangible symptoms and signs of the over-use of tobacco are excessive nervous irritability and excitability as shown by nervous twitchings, fibrillary contractions, increased nerve reflexes, sleeplessness, palpitation, cardiac pains, loss of appetite, digestive disturbances and chronic inflammation of the throat and larynx.

To begin with, the simplest of these conditions, the chronic pharyngitis, lingual tonsil irritations, lingual tonsil cough, and chronic congestion of the larynx, and laryngitis, are conditions frequently seen and generally readily cured by the withdrawal of tobacco and the proper local treatment.

Whether the loss of appetite and dyspepsia are due to the impairment of the saliva which in over-smokers is loaded with nicotin and probably other tobacco extractives, or to excessive stomach irritability, or to impaired circulation (which is generally concomitant with digestive disturbances from this cause) can not be proved, but probably all are factors in causing the impaired functioning of the stomach. In this condition it can generally be promised that if the tobacco is stopped and gentle tonic treatment given the appetite will return, the digestion will improve, and the patient will put on weight.

The most frequent disturbance for which the patient who over-uses tobacco comes to the physician is cardiac disturbance, and generally he has recognized the cause, and has attempted to stop the excessive use of tobacco. The heart is found irritable, palpitating with the least exertion, and sometimes without excuse, occasionally sharp, stinging pains referred to the cardiac region occur, the patient is breathless on slight exertion, and arrives at the top of a flight of stairs with the short, dry, catchy cough so typical of cardiac weakness. Examination of the heart often shows it slightly enlarged, and there may be a mitral systolic murmur, showing an insufficiency of the mitral valve. Such a condition of the heart from tobacco is found occasionally, while an irritable heart from tobacco is of frequent occurrence. Such a heart will generally recover entirely after the withdrawal of tobacco, with physiologic rest (as rising slowly and walking slowly, avoiding all haste, refusing to rush for cars, abstaining from severe muscular exertion) and the administration of small doses of digitalis or strophanthus. Of course during the treatment of such a heart alcohol should be entirely avoided. Entire recovery of the "tobacco heart," if the patient has no other organic lesion, should be expected in from three to six months.

When the heart is seriously affected by nicotin other symptoms are frequently in evidence, such as a small amount of tremor, exaggerated reflexes, and a tendency to cold hands and feet, with excessive sweating, especially of the hands. Such a condition of the hands and feet is particularly noticeable in young men and boys who are over-smoking, and will generally disappear on the stoppage of tobacco and the administration of ordinary doses of strychnin.

Occasionally the first notification of excessive use of tobacco is an impairment of vision. This is of rather rare occurrence, although the tendency to small, contracted pupils is of frequent occurrence. Generally the vision improves after stopping the tobacco.

Much discussion has taken place as to whether the tobacco user gets cerebral stimulation or cerebral quietude from his smoke. As the tobacco user will generally get nervous irritability and probably cerebral irritability if he suddenly stops smoking, and becomes calm and quiet as soon as he takes his smoke, it hardly seems that the nicotin could ever be a cerebral stimulant. Although the rhythmical puffing at the cigar or pipe may produce cerebral stimulation by possibly increasing the blood flow in the brain, and though there may be some cerebral stimulation from the possible slight increase in blood tension due to the act of smoking and the absorption of nicotin, still the action of tobacco as a whole must be put down as sedative and narcotic. The nervousness is quieted, the cerebral irritation becomes diminished, calmness takes its place, and the man thinks and acts calmly, logically and with less haste. This, of course, applies to the man who takes his "smoke" regularly and has not developed chronic tobacco poisoning. The circulatory and nervous depressant effects which occur when the novice smokes his first cigar can not be considered as at all symmetrical with the symptoms produced by a cigar smoked by one who has become tolerant to tobacco. The tobacco user without tobacco not only develops cerebral irritation, as shown by irritability and nervousness, but also has an increased blood pressure from this same nervous tension. In his case certainly, and probably in most instances, though the primary muscular effort of puffing at the cigar may increase the

blood pressure, soon, secondarily, there is a diminished blood pressure, the irritable heart is quieted, the nervous system receives its desired narotic, and the man feels comfortable and contented. Under such conditions he certainly will do better mental work than without his cigar unless he has entirely broken himself from the habit, and his system does not need or expect the narcotic influence of tobacco.

It seems to be a mistake to have believed that the smoke in a tobacco atmosphere does not contain nicotin, because if patients, who show signs of the over-use of tobacco and who have diminished or even stopped its use, remain for several hours in a room filled with tobacco smoke, or ride for hours in smoking cars, they will again show signs of nicotin poisoning. In other words, a man may smoke one or two cigars a day in the open air or in his own home with impunity, but the same amount of tobacco smoked in smoking cars will often produce symptoms of poisoning.

It has not been seriously enough considered that an habitual tobacco user, who has developed an acute sickness or has been subjected to an operation, during convalescence may suffer from nervous symptoms and circulatory phenomena that are due to the withdrawal of his habitual narotic. It can not be stated offhand that even so simple a narotic as tobacco can suddenly be withheld from a system that is undergoing other serious strain without causing serious symptoms. If a heart has become used to the quieting effects of nicotin on its nervous mechanism, and if some of the vital brain centers, especially in the medulla, have become used to this same narcotic, it is probable that serious symptoms may be prevented and a quieted nervous system and better heart action be produced by allowing such a patient to have a more or less frequent "smoke," depending on his previous habit. It is also possible, as so well recognized in the users of opium or morphin, that tobacco to these *habitués,* while not a stimulant to mental activity or causing a patient to be mentally more acute, may still be a positive stimulant to the vital brain centers.

A positive demonstration of such need for tobacco in the convalescence of sickness is well shown by several cases reported by Dr. L. Bolton Bangs, New York, in the *Medical Record,* March 14, 1908.

To draw a moral from the above would be to urge the prohibition of the sale of cigarettes to young growing boys; for physicians to discountenance positively preparatory schools that allow the youth of America to develop or continue the cigarette habit; to teach older boys and young men the physiologic disability that large, and certainly excessive, amounts of tobacco can produce; and to urge, after the young man has acquired his growth, such use of tobacco, if he desires to use it at all, as will be less than enough to cause any of the well-known symptoms, which the man himself can be taught to recognize as these symptoms of over-use of tobacco. The amount that each individual should or may smoke is an entirely individual problem. There is not and never can be a rule as to how much is excessive. One cigar a day may be as serious for one man as are six cigars a day for another.

It is impossible to state how frequently deaths are caused by the over-use of tobacco. Certain it is that not infrequently young boys and young men, generally cigarette users, get into such mental conditions as to become irresponsible criminally, mentally worthless, and even insane. It certainly seems recognizable that serious heart weakness occurs frequently in acute disease, or after operations, in those who use tobacco excessively. Certainly great care should be exercised to use no drug that will cause cardiac depression in such patients and their hearts should be more carefully watched than the heart of an individual who does not smoke. It is quite possible that even during the acute processes a chronic tobacco user should be allowed an occasional short "smoke."

In breaking off from the tobacco habit the question is, shall the patient stop abruptly or gradually? This is best determined by the man, who knows which is the best method for himself. Sometimes bromids help to diminish the restlessness and nervousness, sometimes strychnin is needed, and generally laxatives are indicated. Plenty of fresh out-door air will generally aid such patients in ridding themselves of the habit.

New and Nonofficial Remedies

SINCE THE PUBLICATION OF THE BOOK "NEW AND NONOFFICIAL REMEDIES, 1909," THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK ARE ASKED FOR.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(Continued from page 1497)

BARIUM CHLORIDE—Barii Chloridum.—Baryum Chloratum (Pharm. Germ. edit. 4; Pharm. Helv. edit. 4). Barium Chloride ($BaCl_2,2H_2O$) is the barium salt of hydrochloric acid.

Barium chloride occurs as colorless trimetric plates or glistening scales, odorless, non-efflorescent and having an unpleasant, bitter, sharp, saline taste. It dissolves in 2.5 parts cold and in 1.5 parts boiling water, forming a neutral solution; but is insoluble in alcohol. Barium chloride becomes anhydrous when dried at 120° C. (248° F.).

An aqueous solution of the salt yields, with diluted sulphuric acid, a heavy white precipitate, insoluble in strong acids, and with silver nitrate a curdy, white precipitate, insoluble in nitric acid but readily soluble in ammonia water. Diluted alcohol, after remaining in contact with the salt for several hours, should, on ignition, give a pure yellowish-green flame free from red (absence of traces of strontium). An aqueous solution of barium chloride should not be precipitated by ammonium sulphide nor should any residue remain after adding excess of diluted sulphuric acid to the solution, filtering, and evaporating to dryness. Twenty Cc. of the aqueous solution (1 to 20) must not turn blue on the addition of 0.5 Cc. of potassium ferrocyanide T. S.

Action and Uses.—Barium chloride is a toxic substance, its most striking effects being exerted upon muscle tissue, especially unstriped and heart muscle, and in large dose upon the spinal cord and medulla. By actively stimulating peristalsis, through action on the muscle wall, and by its direct irritant action, it readily produces vomiting and purging. It strengthens the cardiac contraction by direct action on the heart muscle, and by this means and still more by direct action on the vessel walls it greatly increases blood pressure, acting like digitalis. It acts on the muscles like veratrin. It first greatly excites and then paralyzes the spinal cord and medulla. Given in very dilute solution, absorption is small and the barium is deposited in the bones. Injected intravenously it causes tonic and clonic spasms, because of stimulation of the spinal cord and medulla.

In fatal doses it causes hemorrhages in stomach, intestines and kidneys.

Its clinical use has had but little success, chiefly because of gastrointestinal irritation and high toxicity. It has, however, been used in cardiac disease with insufficient blood pressure, as a general "tonic," and with less reason in tremors, in scle-

roses of the central nervous system, internally and locally in varicose veins, etc.

In poisoning the most direct antidote against the portion remaining in the gastrointestinal tract is sodium sulphate, which produces insoluble barium sulphate.

Its use is attended with considerable danger.

Dosage.—0.006 to 0.003 Gm. (1/10 to ½ grain) or 2 to 4 Cc. (30 to 60 minims) of a 1 per cent. solution (5 grains to the fluidounce). Fatal, 0.80 to 0.90 Gm. (13-15 grains). It should always be well diluted before giving.

Internally used in syphilis, scrofula and tremor albus in doses of 0.03-0.10 Gm. (½ to 1½ grains) 3 to 4 times per day; for heart disturbances 0.2-0.4 Gm. (3 to 6 grains) per day. Maximum dose per day 0.6 Gm. (9 grains). Externally employed as an eye-wash in scrofulous eye affections in 10 per cent. solution.

DIGITALIS PREPARATIONS

The chemistry of digitalis is very imperfectly understood, but several principles have been isolated in a greater or less degree of purity. These include digitalin, digitalein, digitoxin, digitonin and digitin. The term digitalin, unfortunately, is applied in a loose way to all of these principles, and in a more restricted sense to indicate digitalinum verum, or true digitalin, which is probably a definite substance.

Digitalinum purum, or German digitalin, is a mixture of several glucosides, consisting of 50-60 per cent. of digitonin and only 5-6 per cent. of true digitalin. German digitalin is the preparation usually found on the market and is ordinarily dispensed when "digitalin" is prescribed.

French Digitalin, or Homolle's digitalin, is also a mixture of several glucosides, but consists mainly of true digitalin.

Merck's crystallized digitalin is neither digitalin nor digitoxin, but digitonin or digitin, Merck using the three terms, crystallized digitalin, digitonin and digitin as synonyms.

Digitaline crystallisée of Nativelle is not digitalin, but is nearly identical with digitoxin.

It must be remembered, therefore, that Merck's "crystallized" digitalin, Merck's "pure" digitalin and the "true" digitalin of Boehringer and Sons, which naturally might be supposed to be identical, are *different in their action.*

DIGITALIN, TRUE—Digitalinum verum Kiliani.—Schmiedeberg's digitalin. A glucoside, $C_{35}H_{56}O_{14}$, found in the seeds and leaves of digitalis purpurea and derived commercially from German digitalin.

To a solution of one part German digitalin in four parts of 95 per cent. alcohol, five parts of ether by weight (Sp. Gr. 0.720) are added and the mixture allowed to stand in a closed vessel for twenty-four hours. In the clear supernatant solution the quantity of dissolved substance is estimated and the whole then subjected to vacuum distillation until its weight becomes 1.6 times that of the total dissolved substance. To this concentrated solution water, in an amount 2.4 times the weight of dissolved substance, is added, forming a solution containing approximately 20 per cent. alcohol, from which crude digitalin gradually separates on standing. The crude product is washed first with 10 per cent. alcohol and then with water and finally dried at a moderate temperature. Further purification is effected by boiling the alcoholic solution with animal charcoal. (Kiliani's method. Hager's Handb. der Pharm. Praxis, Vol. I, p. 1030.)

Digitalin occurs as a white amorphous powder, or in characteristic, granular masses. It melts at 217° C. (412.6° F.) and becomes yellow. It is soluble in 1,000 parts of water and in 100 parts of 50 per cent. alcohol at the ordinary temperature; easily soluble in strong hot alcohol, but nearly insoluble in ether and chloroform. Digitalin dissolved in alcohol and treated with very dilute acid and heat yields digitaligenin and two sugars.

With concentrated sulphuric acid digitalin forms a golden yellow solution which on the addition of potassium hypobromite solution changes to a magnificent rose red or violet red.

If a little digitalin is dissolved in 3 to 4 Cc. of glacial acetic acid to which a trace of ferric chloride solution has been added and the mixture carefully underlaid with concentrated sulphuric acid (Keller's reaction) a deep carmine red band appears; the lower layer of the acetate acid is light yellow changing to brownish. (Difference from digitoxin.)

Sulphuric acid containing a little ferric sulphate gives with a little digitalin at first an intense golden yellow color, and then a red solution; this color rapidly changes to a beautiful and permanent violet. If too much digitalin is used the red color remains and only the surface layer becomes violet.

On heating on platinum foil digitalin should burn without leaving a weighable residue.

If a granule of digitalin is covered with 2 Cc. of 10 per cent. potassium hydroxide solution no color should develop within one minute (absence of other glucosides).

If digitalin is stirred to a thin paste with water and for every 100 parts of water used 22 parts of amyl alcohol is added with shaking, and the mixture set aside in a closed vessel for 24 hours, the presence of digitonin will be indicated by the formation of distinct masses of crystals.

Action and Uses.—The same as those of digitalis. Its cumulative action is probably not so great as that of digitoxin.

Dosage.—It is impossible at present to state the correct dose for digitalinum verum Kiliani. Some authorities give the same dose as that for digitoxin, whereas others give it as much larger. It is best given in pills made by trituration with sugar of milk and massing with glucose. Solutions of digitalin rapidly lose their strength and should be freshly prepared.

DIGITALIN, "FRENCH."—Homolle's Digitalin. Digitaline Amorphe. Digitalin Chloroformique. A mixture obtained from Digitalis purpurea by the method of Homolle, consisting mainly of digitalinum verum, Kiliani.

100 Gm. powdered digitalis leaves are moistened with one liter of water and slowly exhausted in a percolator until the percolate amounts to three liters. This is precipitated with 250 parts of lead acetate and the filtrate from the precipitate treated with 40 parts of crystallized sodium carbonate and 20 parts of sodium ammonium phosphate, in order to remove the excess of lead. The filtrate is precipitated with 40 parts of tannic acid. The tannate is mixed with 25 parts of powdered litharge and 50 parts of purified animal charcoal and dried. From the dried mass the digitalis bodies are extracted with 90 per cent. alcohol, the latter is distilled off and the residue washed with distilled water and again taken up in 90 per cent. alcohol. This is again distilled and the residue exhausted with chloroform. On expelling the latter the digitalin remains behind (Hager's Pharm. Praxis, Vol. I, p. 1035).

French digitalin is a yellowish-white, amorphous powder of a peculiar aromatic odor and bitter taste. It is neutral to litmus, almost insoluble in water, soluble in alcohol and chloroform and insoluble in ether. It softens at 90° C. and begins to melt at 100° C. It is not precipitated by solutions of lead salts; but with tannic acid, it forms a tannate insoluble in water. It is colored emerald green by concentrated sulphuric acid.

Concentrated sulphuric acid dissolves digitalin French, producing a yellow color, which finally goes over to an emerald-green color.

Action and Uses.—Action like that of digitoxin. Uses the same as those of digitalis.

Dosage.—What has been said with regard to the dose of digitalinum verum, applies to the French digitalin; the dose is variously given as 0.00025-0.002 Gm. (1/250 to 1/35 grain). Maximum daily dose 0.006 Gm. (1/10 grain). It must be used with caution and its action carefully watched.

DIGITALIN, GERMAN—Digitalinum Germanicum.—A mixture of glucosides obtained from digitalis seeds according to the process of Walz, and consisting largely of digitonin, with digitalin verum and other glucosides.

Digitalis seeds are extracted with alcohol, the alcohol driven off, the extract diluted with water and purified by precipitation with lead acetate. The filtrate is freed from lead by sodium phosphate. From the liquid thus purified the digitalis bodies are precipitated with tannic acid, the tannate well washed with water and decomposed with lead or zinc acetate. The digitalin thus separated is taken up in alcohol, the latter carefully distilled off and the residue washed with ether as long as it takes up anything. The digitalin purified in this way is dried at a low temperature and finally powdered. (Hager's Handbuch der Pharm. Praxis, 1903, Vol. I, p. 1032.)

German digitalin is a yellowish-white, amorphous powder, soluble in water and alcohol, insoluble in ether and chloroform. It is said to contain about 50-60 per cent. of digitonin and 5-6 per cent. of digitalinum verum and the rest of digitalein and other glucosides.

Sulphuric acid containing a trace of ferric sulphate produces with digitalin, German, an intense golden-yellow coloration, changing to red and finally to a permanent reddish-violet.

Action and Uses.—Similar to those of digitalis.

Dosage.—0.001 to 0.002 Gm. (1/60 to 1/30 grain). Maximum dose 0.004 Gm. (1/16 grain); maximum per day, 0.02 Gm. (⅓ grain).

As German digitalin (so-called digitalinum purum) is a mixture of very powerful active principles, the proportion of which may vary with changes in the manipulations, it is very important that the directions for its preparation should be very carefully followed, and caution should be exercised to purchase only such products as the manufacturers can guarantee to have been made with the necessary care.

DIGITONIN.[1]—A glucoside $C_{27}H_{46}O_{14}+5H_2O$ derived from the seeds of digitalis purpurea and belonging to the saponins.

Digitonin is separated from German digitalinum purum by the addition of ether to the alcoholic solution (see digitalin). The precipitate is dissolved in 10 parts of 85 per cent. alcohol and the solution put into water at 45° C. After standing from six to eight hours the greater part of the digitonin will crystallize out.

Digitonin crystallizes in colorless needles or thick warty masses which dissolve in 600 parts of cold water and 50 parts of warm water to a turbid solution, but dissolves to a clear solution in 50 parts of 50 per cent. alcohol. Its solutions are levorotatory. When heated in alcoholic solution with hydrochloric acid it is split into dextrose, galactose and digitogenin.

Concentrated sulphuric acid dissolves it with a red color which is intensified by the addition of a drop of bromine water.

Concentrated hydrochloric acid dissolves digitonin without color, but the solutions become yellow and finally reddish violet on heating or on long standing.

Keller's reaction gives a rose red zone which soon fades.

1. Crystallized digitalin—Merck.

Action and Uses.—Digitonin acts as a heart depressant when introduced into the circulation, but it is not absorbed from the alimentary canal, and therefore exerts no action on the circulation when taken by the mouth, but it renders digitoxin more soluble whether in infusion or when the leaf is taken by the mouth.

DIGITOXIN—Digitoxinum.—Digitoxinum (Pharm. Helv. edit. 4). Digitaline Crystallisée (Pharm. Française, 1908). Digitoxin, $C_{34}H_{54}O_{11}$ is the chief active principle of digitalis, having the character of a glucoside.

The leaves of Digitalis purpurea having been extracted with water and dried are extracted with 50 per cent. alcohol. This solution is treated with lead acetate, forming a precipitate, which is allowed to settle. The supernatant liquid is decanted. The remaining alcohol is evaporated *in vacuo* and the residue repeatedly extracted with ether. The ether extract is then shaken out with water and concentrated by distillation and the residue recrystallized from hot alcohol (85 per cent.) and decolorized by boiling with animal charcoal (Schmidt's Pharm. Chemie, 3d. edit., Vol. II, p. 1640).

Depending on the solvent from which it is crystallized, it is either hydrated or anhydrous. The hydrated form is obtained when crystallized from alcohol and the anhydrous from chloroform and alcohol mixture, forming colorless rectangular leaflets melting at 243° C. (470° F.) (Pharm. Française, 1908). The anhydrous preparation is official in the Pharm. Française, 1908.

It is insoluble in water, benzin or carbon disulphide, slightly soluble in ether and easily soluble in chloroform. At 15° C. it is soluble in 79.80 parts of absolute alcohol and in 43.04 parts of 90 per cent. alcohol. It is slightly soluble in fatty oils (Pharm. Française, 1908).

Digitoxin dissolved in 2 Cc. glacial acetic acid containing a trace of ferric chloride when poured onto 2 Cc. of concentrated sulphuric acid containing a trace of ferric chloride, will produce a brown color at the zone of contact of the two solutions. This color gradually changes to green and finally an indigo blue; after one-half hour the entire acetic acid layer will become blue. (Pharm. Française, 1908).

It dissolves to a colorless solution in cold concentrated hydrochloric acid, but when this solution is heated on the water bath for some time a green color is obtained. Concentrated sulphuric acid dissolves it, producing a green color.

It should not lose weight appreciably when heated to 100° C. It should be insoluble in water and in benzin, but completely soluble in chloroform. It should leave no residue when ignited (Pharm. Française, 1908).

Action and Uses.—Digitoxin acts much like digitalis. Its activity varies with the method of preparation. Digitoxin from an unknown source should be tested on animals before it is used on patients. Owing to its slow excretion, it is cumulative in action when too frequently repeated. Locally it is very irritant, and when given by mouth is liable to derange the digestion. Penzoldt claims that gastric irritation may be avoided by giving it only when the stomach is full. Owing to its irritant action it is not suitable for hypodermic injection.

Dosage.—Single dose 0.00025 (1/250 grain); maximum daily dose 0.0010 Gm. (1/67 grain). It should be given largely diluted and repeated cautiously.

Antidotes: Emetics, tannin, nitroglycerin, morphine, alcoholic stimulants or camphor.

GELSEMINE HYDROCHLORIDE—Gelseminae Hydrochloridum.—The hydrochloride of an alkaloid, $C_{21}H_{28}N_2O_4$, HCl (Gerrard) ($C_{22}H_{26}N_2O_2$ by Spiegel, Ber. d. deut. Chem. Ges. vol. 26, p. 1054) derived from Gelsemium (Gelsemium sempervirens (L) Ait. f. Fam. Loganiaceæ).

Gelsemine hydrochloride occurs in prismatic crystals or a white crystalline powder. Soluble in water, but difficultly soluble in alcohol.

With concentrated sulphuric acid it gives a yellowish, and with concentrated nitric acid a green coloration. If potassium dichromate is introduced into a solution of gelsemine in strong sulphuric acid a cherry red coloration shading into violet which soon becomes green is produced at the point of contact.

Action and Uses.—Pure gelsemine appears to have a very slight toxic action, increasing reflex action in frogs, to some extent, its action resembling strychnine. The effects of the commercial preparations are thought to be due to the gelseminine which they contain in varying quantities.

It has been used in neuralgia, especially trigeminal.

Dosage.—0.0005 to 0.002 Gm. (1/134 to 1/33 grain).

NOTE.—Gelseminine is a very poisonous alkaloid, found in gelsemium, which has an action very similar to that of coniine but is more depressant to the central nervous system, and must be carefully distinguished from gelsemine. Gelseminine is a mydriatic but is seldom used as such owing to its irritating action. Merck's "gelseminin" appears to consist of gelsemine and not gelseminine.

Gelsemine (Gerrard) is, according to Cushny (Proc. Am. Ph. Assn., Vol. 41, p. 850), the same as the German "crystallized gelsemine."

SANGUINARINE NITRATE—Sanguinarinae nitras.—The nitrate ($C_{20}H_{15}NO_4.HNO_3$) of the alkaloid sanguinarine, obtained from sanguinaria canadensis and other plants.

Sanguinarine nitrate occurs in orange-yellow crystalline needles or deep-orange colored powder. It is soluble in water and in alcohol.

Action and Uses.—Sanguinarine is a violent poison producing in mammals vomiting, purging, convulsions with loss of reflex activity and cardiac depression. The blood pressure is said to be raised by small doses.

The principal use of sanguinarine nitrate is as a stimulant expectorant in chronic bronchitis and in the later stages of acute bronchitis. It is said to be an emmenagogue and used in functional amenorrhea.

Dosage.—0.004 to 0.06 Gm. (1/16 to 1 grain); as an expectorant 0.004 to 0.008 Gm. (1/16 to ⅛ grain); as an emetic 0.015 to 0.06 gm (¼ to 1 grain); average dose 0.015 Gm. (¼ grain) to be given with caution.

STROPHANTHIN THOMS. — A crystalline glucoside ($C_{29}H_{46}O_{12} + 9H_2O$), obtained from Strophanthus gratus. It is identical with the ouabain obtained from Ouabaio wood by Arnaud (the official strophanthin is methyl-ouabain ($C_{31}H_{48}O_{12}$).).

The light-brown dehaired seeds of strophanthus gratus are cold pressed to free from oil. The oil free cakes thus formed are broken up and extracted with 96 per cent. alcohol. The alcohol is distilled off on the water bath, leaving a residue, which is described as follows: It consists of several layers—an upper thin layer of oil, then an aqueous alcohol layer, followed by a yellowish brown mass of crystals, under which is a layer of a brown extract, from which an amorphous strophanthin can be isolated. The above mentioned crystals are freed from the mother liquor and recrystallized from hot water. The seeds yield about 3.62 per cent. of crystallized strophanthin.

Colorless quadratic crystals of bitter taste and easily soluble in hot water. Soluble in 100 parts of cold water and 30 parts cold absolute alcohol and 30 parts amyl alcohol. It is slightly soluble in acetic ether, ether and chloroform. Its solubilities require further study. Solutions of 1 part of crystallized strophanthin in 100 parts of 95 per cent. alcohol have been frequently observed to deposit crystals on standing.

A solution of 0.01 gm. in 1 Cc. water run onto a layer of concentrated sulphuric acid colors the latter pink to red and the aqueous layer is colored a dirty green color.

Heated to 105° C., it loses 20 per cent. of water. The strophanthin thus dried melts at 187-188° C. Upon ignition no weighable residue should remain.

Heating with dilute hydrochloric acid or sulphuric acid produces hydrolytic cleavage, yielding a body which is identical with rhamnose.

Action and Uses.—Its pharmacologic action is probably qualitatively identical with that of the official strophanthus or strophanthin, but the crystallized is more than twice as active as the official strophanthin when injected subcutaneously or intravenously. The action of crystallized strophanthin appears to be identical with that of the purest preparation of strophanthin from Strophanthus Kombe; this action develops more rapidly, the drug is more quickly excreted, and shows less tendency to cumulative action than in the case of digitalis.

Strophanthin Thoms is used in place of strophanthus as a substitute for digitalis.

Dosage.—It is recommended in doses of 5 minims of a 1 per cent. solution by the mouth, gradually increased by 1 minim until the desired effect is obtained, which seldom requires more than ten minims (or about one-tenth of a grain of strophanthin). (H. Schedel, Arbeit a. d. Pharm. Inst. d. Universität, Berlin, II, 1904, p. 97). Single dose by mouth, 0.003 to 0.025 Gm. (1/20 to 2/5 grain); daily dose, up to 0.03 Gm. (½ grain). The larger doses are probably not absolutely safe. Intramuscularly or intravenously: The correct dose has not been accurately determined, but it appears to be one-half milligram (1/130 grain) or less for a single dose, and only one such dose should be given in a day as a rule. For intramuscular injection it should be dissolved in about 4,000 parts of distilled water, and even in that dilution it occasions some pain. The intramuscular injection should be repeated only by the physician himself.

AMYL VALERATE — Amylis valerias.—Amyl valerate, $CH_3.CH(CH_3).CH_2.COO(CH_2.CH(CH_3).CH_2.CH_3) = C_{10}H_{20}O_2$, is the iso-amyl ester of iso-valeric acid.

Amyl valerate is obtained by separating (by distillation) the ester which is formed when valeric acid or sodium valerate is added to a mixture of iso-amyl alcohol and sulphuric acid and the distillate obtained, washed, dried and redistilled.

Amyl valerate is a colorless liquid, having when dilute an odor of apples. It is insoluble in water, soluble in alcohol, ether and chloroform. It boils at 188-190° C. (370.4-374° F). Its specific gravity is .858 at 15° C.

Action and Uses.—Amyl valerate has been employed in the treatment of gallstone colic, as a sedative and to dissolve cholesterin. Its employment in renal colic is not satisfactory.

Dosage.—To relieve biliary colic, 0.2 to 0.04 Cc. (3 to 6 minims) in capsules every half hour; or 1 Cc. (15 minims) in capsules, three times daily.

(To be continued)

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SATURDAY, MAY 8, 1909

THE PHYSICIAN AND COLLEGE ATHLETICS

The sanest thing that has been said about college athletics in recent years occurs in a lecture recently delivered by Dr. Edward H. Nichols, medical supervisor of the Harvard athletic teams. The following paragraphs which, as they are reported within quotation marks in the Boston *Herald*, of Monday, April 19, would seem to be authentic, represent conclusions of his medical experience and careful weighing of the situation. He said, in part: "I believe that competitive athletics develop courage, tenacity, a sense of fair play, coordination, self-sacrifice, the control of men, business principles and power, and these to a very high degree in many cases, and that the good far outweighs the detrimental publicity, extravagance, physical energy and excessive work, the evils of the coaching system and the distortion of values. Especially is this so since the evils seem to me controllable, the extravagance by removal of the money which makes it possible, the excessive work and energy by adequate medical supervision, the coaching evils by abolition of the system, and distortion of relative values by changes in the points of view of parents and by increased requirement of work by faculties."

In this, Dr. Nichols points out exactly the evils that everyone who has studied the subject seriously appreciates must be reformed and best of all he indicates the ways and means for the reformation. If athletics are to continue in our universities this reformation must come soon or there will be a revulsion of feeling that may turn us aside from the present movement toward open air life which has many benefits for mankind in its train. Most of the evils center around the professional coaching system. It is through the professional coach that young men are tempted to overdo their strength in athletics and it is his influence that makes a business of the college sport and brings in its attendant train the extremely undesirable publicity, the temptations to extravagance and to betting evils of various kinds which no one who knows anything about the situation can ignore. Athletics must become once more sport and then they will cease to be a detriment to health, an injury to studies, and an unfortunate factor in college social life. To have this pointed out so clearly by a member of the profession is a source of pride, and his opinion may well help the medical profession of the country to appreciate just where the evils of college athletics lie so that there may be cooperation throughout the country in efforts for their eradication.

This message comes opportunely, for we are just entering on another six months of university life when the air will be full of college athletics from baseball through rowing to football. In each of these sports the evils spoken of can be seen clearly and the abuses which they engender are a serious detriment to the benefits that might reasonably be expected from college athletics. Now is the time, therefore, to insist on the reformation of these abuses which have been growing ever greater and greater in recent years and show no sign of amelioration. Evidently there is need of definite teaching of the public in this matter and no class of men is better situated than physicians and none will command attention so readily on a subject that is of so much importance for the health and the character of the rising generation.

THE PATHOLOGIST AND THE CLINICIAN

We hear many complaints nowadays concerning the superseding of the trained judgment and clinical experience of the practitioner by the laboratory investigations of the pathologist. It is asserted that, with an overweening arrogance, the man who is supposed to represent "scientific medicine" to-day is prepared with his test tubes, his reagents, and his microscope to settle offhand those matters of difficult diagnosis that a little while ago were the peculiar prerogative of the trained clinician.

In *Northwest Medicine* for April, Dr. Griswold turns the tables by a counter attack. He complains that with a yearly widening and increasingly important field, but little opportunity is afforded the pathologist to do justice to his side of the healing art. He is rarely called in consultation, even in hospitals with a pathologist on the staff. "He is everywhere excluded," says Dr. Griswold, "from gaining practical knowledge, and then his work is criticised as impractical. His reports are taken by the practitioner and used in determining a diagnosis, without his being present to interpret the results of his work and give them due importance in the case. He seems everywhere to be considered the agent, never the peer, of the practitioner."

Animal experimentation is the sole field, Griswold continues, that the pathologist is allowed freely to cultivate. His study of gross pathology is based only on such specimens as the clinician may see fit to send him after they have been thoroughly changed by time and mauled with handling; hardly ever, while they are part of the living body. In other words, instead of the clinician becoming more and more at the mercy of the pathologist, it is the pathologist who is entirely at the mercy of the clinician. He suggests

that if pathologists were given a place as consultants, many men of ability throughout the country would be willing to take up the work. He criticises those laboratories that advertise to do work at ridiculously small prices, *e. g.*, an examination of smears and sputum for $1.00. "One might do well," he says, "examining sputum for men who do not suspect tuberculosis until the disease has advanced to a stage that makes searching for bacilli unnecessary, because in a smear they will be so thick on the slide that every field will contain them; but if doing work for competent practitioners, this fee would mean starvation."

The satisfying part of this disputation lies in the evidence it affords that both sides are realizing the necessity for the same thing, namely, that their work should be cooperative and not mere piece-work. Each should at least know enough of that side of the joint labor in which the other is an expert to enable him to comprehend the united whole with a due sense of proportion.

TYPHOID BACILLUS CARRIERS; THEIR IMPORTANCE AND MANAGEMENT

The fact that persons who have suffered from typhoid fever, and even those who have never had an attack of illness clinically recognizable as this disease, may carry typhoid bacilli in their excreta for years, has been widely recognized only recently. Like all new discoveries, there has been a tendency to overestimate its importance, but it seems fairly certain from recent German work that at least 5 per cent. of typhoid patients become bacillus carriers. This means that the percentage of bacillus carriers among those who have not had typhoid fever is much smaller than this. Nevertheless even this apparently small percentage of bacillus carriers must mean a great many infectious individuals in a country where typhoid fever is as prevalent as in the United States. The view that seemed to gain ground for a while, that except in widespread outbreaks the majority of cases were due to bacillus carriers will, we think, have to be abandoned. The danger from bacillus carriers is not so great as it might seem at first sight, for it is necessary that conditions be favorable for transmission of the bacteria from the carrier to other people, and very often such conditions are not present. Perhaps it is only occasionally that the bacillus carrier is in a situation which enables him or her to infect any large number of healthy individuals. The danger from bacillus carriers therefore, while it has no doubt been overestimated in some respects, is still a very important problem.

Just what the percentage of bacillus carriers in the United States amounts to we do not know. No such widespread research regarding this subject as has been carried on in Germany has yet been attempted here to our knowledge. Presumably, the percentage will be the same. If there ever comes a time when it becomes customary with us to investigate every patient with typhoid fever as to infectivity, as we now do with diphtheria patients, we shall have to decide what is to be done with bacillus carriers. It is obvious that the isolation of 5 per cent. of all individuals who have had typhoid fever is a practical impossibility. It might seem theoretically feasible to form colonies of bacillus carriers as we now do of epileptics, but this is purely utopian, and the public would not stand for the interference with personal liberty and the breaking up of families which would result from this method. Educating the bacillus carriers in strict cleanliness, and impressing on them their danger to their fellow men would not, we think, produce any far-reaching result. Even among the intelligent and naturally cleanly the constant care and watchfulness required would soon become extremely irksome, and the precautions would no doubt lapse. Among the ignorant and dirty, and many carriers belong to this class, education of this sort would avail but little. The effect of frequent and active purgation seems to be almost nil, the bacilli remaining as before. The use of so-called intestinal antiseptics in these cases has been given a good trial by the Germans with practically no result. Attempts at active immunization of the bacillus carriers also seem to have been futile, as perhaps might have been expected, especially in those carriers who had had a definite attack of typhoid which itself no doubt conferred immunity. The conception of Forster that the gall bladder is the site of constant production of typhoid bacilli in these cases has been widely accepted, and makes still more clear the futility of attempting elimination by purgation or intestinal antisepsis. It has led to the suggestion that extirpation of the gall bladder should be practiced on bacillus carriers. This, it seems to us, is almost as utopian as segregation. At present, we have no laws which would permit the forcible incarceration of certain individuals and the removal of their gall bladders; and if we could pass such laws it would be doubtful whether we should be justified in performing so dangerous a major operation on all bacillus carriers. Furthermore, the latest observations carried on by Koch and his pupils seem to show that in bacillus carriers not only the gall bladder, but also the smaller bile passages are infected.

Recent observations of Liefmann[1] indicate that there is one method which may prove to be of value in ridding typhoid bacillus carriers of their undesirable messmates, and this is by changing the intestinal flora, and introducing bacteria inimical to the typhoid bacilli. It is possible that here we have the solution of the problem, not only in typhoid bacillus carriers, but also in cholera and dysentery bacillus carriers. The observations of Liefmann are not extensive enough to place the method on a firm basis however, and further observation is needed.

1. Münchener med. Wchnschr., Mar. 9, 1909.

BETTERMENT OF STATE CHARITIES

Probably one of the most important bills for the betterment of state charities is the Illinois Senate Bill 448, which has been prepared, reported out, and recommended by the Illinois Senate Committee on Charitable, Penal and Reformatory Institutions.

In the first place, it is noteworthy that a senate committee, composed of members of both political parties and sufficiently numerous to furnish every variety of opinion, should have evolved a measure that could be endorsed without a single adverse vote in committee.

Its mode of construction is also noteworthy. It is a composite bill, its provisions comprising the best features of three separate bills of different but allied purport, presented by three different senators. The bill itself aims at that all-important point in efficient economic legislation, the removal of the state charities entirely from the baleful influence of politics. This it effects by placing the control of such charities under a board of administration consisting of five men, each an expert in one of the different fields that the board will have to cover in the performance of its administrative duties. By providing an adequate salary, in return for the devotion of their whole time and residence at the center of administration of the members of the board, it is possible to attract thoroughly competent men for the positions; and by making the tenure of office permanent, subject only to removal for definite cause—which would necessarily amount to a charge of either incapacity or misconduct—it minimizes the temptations to graft; for, unfortunately, until human nature shall be reconstituted, one of the inevitable effects of the short-service official system will be the desire to "make hay while the sun shines," leading the official ever farther and farther on the path of dishonesty and disregard of public interests.

The principal noteworthy points in the bill itself are: the extension of the civil service system; the continuation and expansion of the present admirable hospital system; the provision of a system of business administration, tending toward a combination of maximum efficiency with minimum waste; an application of the principle of the separation of slight offenders from hardened criminals and of juvenile offenders from all others—which is a recognition of the fact that, if our penal system does not reform criminals, at least it ought not to be allowed to manufacture them; an extension of supervision over boarded-out children—an admirable state charity, or, rather, state insurance system, which has been developed to the fullest extent with the greatest possible advantage in New South Wales,[1] and, finally, the provision of an extra check against all leakage, both in efficiency and in expense, by a local non-salaried commission on charities and corrections assigned to each state charitable, penal and correctional institution.

The only danger to this measure, recommended, as it is, by the unanimous vote of the senate committee, lies in the probability of factional opposition by such members of the general assembly as may place private considerations before public interest. Now, therefore, is the time for the physicians of Illinois to wield their personal influence individually on their respective representatives. If each physician will at once write to his representative urging the passage of this bill as it stands, without any emasculation, and will at the same time exercise his missionary influence among his patients to educate public intelligence on the importance of such matters, an object-lesson in the advantages of organized medicine will be given, the effect of which will reach throughout the entire country.

THE COMING PHARMACOPEIA CONVENTION

As the time approaches for the Pharmacopeia convention, an effort is being made to perfect the list of bodies entitled to send delegates. A circular letter from the Board of Trustees of the United States Pharmacopeial Convention is published in another column, in order to call attention to the qualifications and to emphasize the importance of the selection of delegates as early as possible by all bodies which can qualify. The work of this convention is one of immense importance to the medical profession, and requires men of broad experience and good judgment. The medical societies have an opportunity to show their interest not only by electing the best possible representatives, but also by discussing some of the many points that must be brought up, and perhaps by giving definite instructions to their representatives. There is no doubt that changes are needed in the Pharmacopeia. There is no doubt also that the manufacturing interests will be well represented in the coming convention, as they have been in the recent ones; the interests of the medical profession will be represented if medical societies attend to the matter, otherwise not.

THE COUNTY SOCIETY

The county society is the basis of organization. It is not only the portal of entrance to the state and the national medical associations, but it is the unit that influences the whole organization. As are these units, so will be the whole. The state that has active working county societies will have an active working state society, and practical results of every endeavor will follow. On the contrary, when the county societies do little or nothing, the organized profession of that state will do little or nothing—and will be without influence. Incidentally, the secretary of the county society is the one on whom depends whether or not the society shall be an active working body. Occasionally there will be a sufficient number of members who have the good of the society at heart to overcome a poor secretary, but very seldom. Hence the plan of having an annual meeting of the county secretaries, which has been adopted in several states, is a most commendable one and must re-

1. THE JOURNAL A. M. A., March 7, 1908, li, 771.

sult in good in various ways. These thoughts are suggested at this time by the paper of Dr. Sleyster in this issue. He speaks not from theory or observation, but from practical experience, and brings out many valuable points.

Medical News

ALABAMA

Personal.—Dr. Wooten M. Wilkerson, Montgomery, has been elected a member of the board of trustees of the Alabama-Bryce Hospitals.——Dr. William G. Ward, Mobile, has been elected health officer of Mobile county.——The Jefferson County Medical Society, at its meeting April 26, decided to support Dr. Robert B. Harkness as health officer of Birmingham and virtually defied the demand of the city council for the election of another health officer.

State Society Meeting.—At the annual meeting of the Medical Association of the State of Alabama, held in Birmingham, April 20 to 23, the following officers were elected: President, Dr. Wooten M. Wilkerson, Montgomery; vice-presidents, Drs. Robert J. Redden, Sulligent, and Robert L. Sutton, Orrville; secretary, Dr. James Norment Baker, Montgomery; treasurer, Dr. Henry G. Perry, Greensboro, and state health officer, Dr. William H. Sanders, Montgomery, re-elected for a five-year term. A resolution was adopted making it necessary for physicians to submit their diplomas from accredited medical colleges before being authorized to take the state examination. The Jerome Cochran lecture was delivered by Dr. Lewellys F. Barker, Baltimore, on "Clinical Methods of Cardiac Investigation." The 1910 meeting of the association is to be held in Mobile.

ALASKA

Hospital Burned.—The three-story hospital building at Katalla was destroyed by fire April 14, with a loss of about $25,000, partially covered by insurance.

License to Be Required.—It is announced from Valdez, that hereafter physicians, surgeons, and midwives desiring to practice in Alaska, will be required to procure a license from the federal authorities. The new law amending the Alaska code, which passed congress February 6, provides that physicians must secure a license, which will be granted to members of the medical profession who have diplomas recognized by the Association of American Medical Colleges.

CALIFORNIA

Personal.—Dr. Thomas E. Cunnane, Ventura, has been selected as physician of Ventura county.——Dr. and Mrs. David Haddon, Berkeley, have gone abroad for six months.——Dr. Joseph E. Artigues has been elected surgeon and Drs. Michael H. Etcheverry and Edward A. Besson have been made physicians to the French Hospital, San Francisco.

Hospital News.—A fire in the roof of the main or middle ward of Yuba County Hospital, Marysville, April 7, caused damage of $10,000 and threatened to destroy the entire institution.——An order is said to have been signed by Judge Cabaniss, April 22, declaring the Clara E. Barton Hospital, San Francisco, insolvent.——Marysville Hospital was opened for reception of patients April 18.——Contracts have been let for the construction of the Adler Sanitarium, San Francisco.——The supervisors of Butte County have decided to expend $10,000 for repairs and sanitary improvements at the county infirmary.——The Methodist Hospital, Los Angeles, is to be transferred to the Hazard residence, which was recently purchased for $21,500.

State Society Meeting.—At the annual meeting of the Medical Society of the State of California, held in San Jose, April 20 to 22, the following officers were elected: President, Dr. James H. Parkinson, Sacramento; vice-presidents, Drs. William Simpson, San Jose, and William B. Sawyer, Riverside; secretary, Dr. Phillip Mills Jones, San Francisco (re-elected), and councilors, Drs. Fred Baker, San Diego, Thomas C. Edwards, Salinas, George H. Aiken, Fresno, Henry A. L. Ryfkogel, San Francisco, and Wallace A. Briggs, Sacramento. The following were nominated for members of the State Board of Medical Examiners: Drs. Andrew S. Lobingier, Los Angeles; George F. Reinhardt, Berkeley; Walter Lindley, Los Angeles; William W. Roblee, Riverside; Fred R. Burnham, San Diego; William P. Burke, San Francisco; Charles D. Ball, Santa Ana; J. Henry Barbat, San Francisco; Abraham L. Cothran, San Jose, and George H. Evans, San Francisco. Sacramento was selected as the next place of meeting.

GEORGIA

Personal.—Dr. Henry M. Fullilove, Athens, has been appointed physician of Clarke county.——Dr. William S. Elkin, Atlanta, has been elected president of the Capital City Club.

Permit for Sanitarium Refused.—By unanimous vote the hospital and charities committee of the Atlanta General Council, is said to have denied the application of Dr. William A. Starnes for a permit to conduct a sanitarium on Edgewood avenue.

More Beds Needed at Grady Hospital.—The new superintendent of Grady Hospital, Atlanta, says that there is urgent need for 100 more beds in that institution. The annual appropriation of $60,000 is inadequate, and should be increased to $75,000. He estimates that the addition necessary for the hospital will cost about $100,000.

State Board Will Distribute Antitoxin.—At a meeting of the State Board of Health, April 23 and 24, it was decided to supply on demand to any physician in the state, a sufficient supply of virus and antitoxin for use in cases of rabies, and to give farmers and others on application a similar preparation for the treatment of hydrophobia in animals.

Commencements.—The annual commencement exercises of the Medical College of Georgia, Augusta, were held May 1. The chancellor, Hon. David C. Barrow, and Rev. E. F. Dempsey delivered addresses. A class of 22 was graduated.——A class of 40 was graduated from the Atlanta College of Physicians and Surgeons April 29.——The Atlanta School of Medicine graduated a class of 51 April 26. The degrees were conferred by Hon. W. J. Northen, and the doctorate address was delivered by Surgeon General Walter Wyman, P. H. and M.-H. Service, who spoke on "The Relation of the Physician in Private Practice to Public Health."

State Association Meeting.—At the sixtieth annual meeting of the State Medical Association of Georgia, held in Macon April 21 to 23, Athens was selected as the place of next meeting. The following officers were elected: President, Dr. Thomas J. McArthur, Cordele; vice-presidents, Drs. Marcus F. Carson, Griffin, and John R. Shannon, Berner; secretary, Dr. Claude A. Smith, Atlanta (re-elected); delegates to the American Medical Association, Drs. George R. White, Savannah, and Henry F. Harris, Atlanta; and councilors, Drs. William B. Hardman, Commerce, ninth district; Wyman W. Pilcher, Warrenton, tenth district, and Jefferson D. Hermann, Eastman, eleventh district.

ILLINOIS

Chiropody Bill Passed.—The house of representatives has passed, by a vote of 18 to 13, Representative Rutzler's bill creating a board of chiropody to be appointed by the governor, with power to examine and license applicants.

Personal.—Dr. George S. Murphy, Rockford, has moved to Lubbock, Texas, where he is now building a thirty-bed hospital, to be known as Lubbock Sanatorium.——Dr. Rowland L. Green, Peoria, has sailed for Europe.——Dr. William R. Parkes has been elected president of the Evanston Antituberculosis Association.

Society Meetings.—At the annual meeting of the Central Illinois District Medical Society, held in Pana, April 27, the following officers were elected: President, Dr. Don W. Deal, Springfield; vice-presidents, Drs. Franklin A. Martin, Tower Hill, and J. William H. Sparling, Moweaqua; secretary, Dr. Charles Burgess, Pana; treasurer, Dr. John N. Nelms, Taylorville, and censors, Drs. Everett J. Brown, Decatur, John D. Colt, Litchfield, and Louis F. Brown, Hillsboro.——At the annual meeting of East St. Louis Medical Society, April 26, the following officers were elected: President, Dr. Oro J. Culberson; vice-president, Dr. Roy S. Stanton; secretary-treasurer, Dr. Charles W. Lillie, and censors, Drs. John A. Grimes and Henry R. Ressel.

Chicago

Concert for Hospital.—A concert was given in Orchestra Hall May 2, in aid of the building fund for the new German Evangelical Deaconess Hospital at Fifty-fourth place and Morgan street.

Commencement.—Degrees were conferred on a class of 31 by Dr. Jacob F. Burkholder, president of the Illinois Medical

College, April 30. The doctorate address was delivered by Dr. William F. Rittenhouse.

How Communicable Diseases Spread.—The chief of quarantine and disinfection of the department of health summarizes the cause of the spread of diphtheria and scarlet fever as follows: Mild unrecognized cases; hidden cases; mild recognized cases about which sufficient precautions have not been taken, and convalescent cases apparently well.

Personal.—Dr. David Lieberthal, professor of skin and venereal diseases in the Illinois Medical College, has resigned. ——Dr. Isaac A. Abt has resigned as associate professor of pediatrics in Rush Medical College, and has accepted the professorship of pediatrics with Dr. Frank X. Walls in Northwestern University Medical School.——Dr. Carl Wagner has been appointed attending surgeon in the Columbia Hospital. ——Dr. Thomas A. Woodruff has been elected president of the Calumet Club.

MARYLAND

Gift to County Hospital.—Mr. William Newcomer, Hagerstown, has given $15,000 to the building fund of the Washington County Hospital, Hagerstown, in commemoration of his golden-wedding anniversary.

The New Bayview Hospital.—Plans for the new hospital to be erected at Bayview, the Baltimore almshouse, are almost perfected. The new building will cost probably $75,000, and, it is to be hoped, will relieve the present congested condition at the institution, where at present there are nearly 1,600 inmates with accommodations for only 1,200.

Baltimore

Psychiatric Clinic Building.—The plans for the Phipps' Psychiatric Clinic provide for the construction on the grounds of Johns Hopkins Hospital of a building five stories in height, capable of accommodating 500 patients in the early stages of insanity.

Mosquito Ordinance.—The health commissioner of Baltimore has announced his intention of rigidly enforcing the anti-mosquito ordinance which went into effect May 3. The penalty for violaton of any provision of this ordinance is a fine not to exceed $10.

Personal.—Dr. Claribel Cone, Baltimore, sailed for Italy April 24.——Dr. James S. Woodward, for twenty-one years chief resident surgeon of the Maryland Steel Company, Sparrows Point, has resigned and will retire from practice.——Dr. Charles K. Edmonds has returned to Baltimore after six years' absence in China.——Dr. Lillian Welsh has been elected president of the Naples Table Association for the Promotion of Scientific Research by Women.——Associate Professor S. F. Acree, Dr. Carl Vogtlein, associate in pharmacology and physiologic chemistry, and Prof. Harvey C. Jones of Johns Hopkins University will sail for Europe early in June.——Dr. Samuel C. Chew is ill with influenza at the University Hospital.

MASSACHUSETTS

Unlicensed Practitioner Fined.—Anna Podlinski, Turners Falls, charged with practicing medicine without a license, is said to have been found guilty in the district court April 13, and fined the minimum penalty, $100. An appeal was taken.

Personal.—Dr. Winthrop S. Blanchard has been appointed bacteriologist of the Boston Board of Health.——Dr. Charles A. Drew, Bridgewater, has been appointed superintendent of the Worcester City Hospital.——Dr. William A. Dunn, Boston, has had conferred on him by the pope the honorary rank of Knight Commander of the Order of Gregory the Great.

Lecture and Clinical Talk.—Dr. S. Adolphus Knopf, New York City, gave a public lecture in the White Fund Course at Lawrence, May 5, and afterward gave a clinical talk to the medical profession of the city on the "Early Physical Diagnosis and Prognosis of Pulmonary Tuberculosis," after which supper was served and a reception held.

Harvard Approves of Medical School in Orient.—The movement in the Harvard Medical School for the establishment of a medical school in the Orient, preferably in China, has been approved by the president of the university and the faculty of the school. It is proposed to send Dr. M. B. Edwards to China to carry on investigations with regard to the location and to raise an endowment fund, of which the following have been named as trustees: President Charles W. Eliot, chairman, and Drs. Henry P. Walcott, Arthur T. Cabot, William T. Councilman, Boston; Walter B. Cannon, Cambridge; Henry A. Christian, Boston; and E. C. Moore.

Harvard Alumni Doings.—The annual alumni day of Harvard University Medical School will be held May 20. The regular teaching is to continue. There are to be clinics and demonstrations at the hospital, and a luncheon will be served in the administration building, tendered by the medical school. In the afternoon the laboratories will be open for inspection, and in the evening the triennial dinner of the medical alumni association will be held, over which Dr. Alfred Worcester will preside as toastmaster.——The annual meeting of the alumni association will be held in Sprague Hall, Boston Medical Library, June 29. On June 30, the association will have its headquarters at Stoughton Hall in the College Yard, where lunch will be served for members.——June 8 has officially been set aside for reunions at the American Medical Association, Atlantic City, and Harvard Medical Alumni will hold an informal reunion and dinner on that evening. Arrangements are in charge of Dr. Nathaniel B. Potter, 48 W. 51st street, New York City.

MICHIGAN

Agrees Not to Prescribe Liquor.—At the recent meeting of the Ionia County Medical Society, resolutions were adopted that the members of the society should not write prescriptions for intoxicating liquors to be used as beverages.

Communicable Diseases.—During March 331 cases of pneumonia, 250 of tuberculosis, 87 of typhoid fever, 216 of diphtheria, 29 of meningitis, 89 of whooping cough, 319 of scarlet fever, 720 of measles, and 99 of smallpox were reported in the state.

Personal.—Dr. and Mrs. Frederick H. Williams, Lansing, sailed for Germany, April 27.——Dr. Colonel B. Burr met with a painful fall at the Michigan School for the Deaf, Flint, April 20.——Dr. David J. Levy, health officer of Kalamazoo, has resigned and has been succeeded by Dr. Alvin H. Rockwell.——Dr. Oscar C. Breitenbach, Escanaba, is reported to be seriously ill with typhoid fever.——Dr. Hermann C. Emmert has been made physician of the Wayne County House, Eloise, vice, Dr. Romeo H. Earle, resigned.

MINNESOTA

Vital Statistics.—During 1908, there were 44,247 births and 22,160 deaths reported in the state.

Tuberculosis Hospital.—The assembly has granted a license to the St. Paul Antituberculosis Society for the operation of a tuberculosis hospital on a site on which the society has secured options. It is planned to establish a summer camp for tuberculosis at this place.

In the Hands of the Law.—A jury in the case of Royal M. Bly, Minneapolis, charged with assisting in a criminal operation, returned a verdict of not guilty April 22.——H. E. Coger, head of a dermatologic institute in Minneapolis, is said to have been deprived of his license to practice medicine in the state by the State Board of Medical Examiners, at their meeting April 16. Attention was first called to this individual by the death of one of his patients said to have been due to blood poison following an operation for the removal of a scar, and it was then ascertained that he had not been a graduate of a reputable medical school when he applied for a reciprocal license in January.——Dr. Robert W. Campbell, Swanville, charged with assault and battery on the person of a school teacher, is said to have been found guilty and fined $25 with the alternative of 20 days in jail. He has appealed the case. ——Dr. Charles B. Lenont, Virginia, against whom a verdict for $231.53 is said to have been returned in the District Court on the charge of malpractice, has filed notice that he will demand reversal of the judgment or will ask a new trial.—— Arthur C. Moorhead, formerly of Minneapolis, has filed in the Ramsey County District Court a petition asking that a writ of certiorari be issued against the State Board of Medical Examiners for having revoked his license to practice medicine in the state. The petition asks that the District Court demand the records and proceedings of the hearing and proceed thereon for reversal.

MISSISSIPPI

Society Meetings.—At the session of the Clarksdale and Six Counties Medical Association, held in Clarksdale March 25, the following officers were elected: President, Dr. John S. Brooks, Robinsonville; secretary, Dr. Lewis E. Pierce, Stovall, and treasurer, Dr. Luther D. Harrison, Clarksdale.——At the annual meeting of Lauuerdale County Medical Society, held in Meridian March 25, Dr. James Bennett was elected president; Dr. T. J. Houston, vice-president; Dr. Samuel H. Hairston,

secretary-treasurer; Dr. Robert L. Turner, delegate to the state society, and Dr. Henry S. Gully, censor, all of Jackson.

Contract Practice Among Farmers.—In the eastern part of the state, particularly in Jones, Wayne and Jasper counties, the Farmers' Union is said to have become a menace to ethical medical practice by the inauguration of contract practice among farmers. "Union doctors" are established in Heidelberg, Sandersville and other rural towns. They charge a fee of $10 per annum for family practice, the head of the family making the contract with the physician. Jones County Medical Society, at a recent meeting voted to debar from membership physicians who make individual contracts, as well as physicians who consult such contract practitioners.

NEBRASKA

Personal.—Dr. Frederick J. Wearne, Omaha, who has been abroad for several months, sailed for home April 24.——Dr. Fletcher A. Butler, Harvard, has been elected president of the Clay County Medical Society, and delegate to the state society.——Dr. Lucien Stark, Henderson, has been elected president of the York County Medical Society.

Elections.—At the annual meeting of Richardson County Medical Society, held in Falls City, April 13, Dr. Millard L. Wilson, Falls City, was elected president; Dr. John A. Waggener, Humboldt, vice-president; and Dr. Gaylord M. Andrews, Stella, secretary-treasurer.——Gates County Medical Society, at its quarterly meeting, held in Beatrice, April 8, elected Dr. Charles S. Curry, Beatrice, president; Dr. Ira N. Pickett, Odell, vice-president; Dr. John I. McGirr, Beatrice, secretary-treasurer, and Dr. Louis Penner, Beatrice, censor.——Knox County Medical Society held its annual meeting at Creighton, April 2, and elected the following officers: President, Dr. James H. Mettlen, Bloomfield; vice president and delegate to the state medical society, Dr. Czar C. Johnson, Creighton; secretary-treasurer and alternate delegate to the state medical society, Dr. John B. Bates, Verdigris, and censors, Drs. William H. Britt, Creighton; Edson L. Bridges, Wausa, and Willard K. Clark, Niobrara.——Cuming County Medical Society, at its last meeting, elected Dr. Harry W. Francis, Bancroft, president; Dr. Thompson, Beemer, vice-president, and Dr. Harry L. Wells, West Point, secretary-treasurer.

NEW YORK

Assembly Action.—The assembly has for the second time refused to pass the bill to allow the use of skimmed milk in New York City for manufacturing purposes.——The assembly concurred in the senate amendment to the bill reducing from 15 to 9 the number of members of the State Board of Pharmacy and providing for their control by the State Board of Regents. This amendment will prevent the prosecution of manufacturers for violation of the pharmacy laws outside the state.

May Change Site of State Hospital.—If the present plans for the purchase of a site for a state hospital at Greenvale, Long Island, are not carried out and the land is not actually purchased and conveyed to the state, the commission will still have power to buy other lands at other places, even though they may have gone so far as to enter into contracts for the purchase of the former property. This decision was made necessary owing to the opposition of a large number of residents in the neighborhood of Greenvale to the establishment of the hospital in that locality.

Is State Responsible?—The Deputy State Superintendent of Public Instruction contemplates bringing a test action to decide if the state can not be held negligent because a client of his was afflicted with tuberculosis while in the employ of the state education department at the capital. It is claimed that this client would not have contracted tuberculosis if she had not been required to work in a room which had been occupied by another girl who afterward died of tuberculosis. Two other girls besides the client were also affected by the disease and it is claimed that no move was made to fumigate until after the three girls had become ill.

Senate Passes Bills.—The senate has passed the Hoey bill creating in New York a board of ambulance control, to district the city for ambulance service and to have jurisdiction over such service. The board is to consist of the police commissioner, the charities commissioner, the president of the board of trustees of Bellevue and the Allied Hospitals, and two citizens representing private hospitals, to be appointed by the mayor.——The bill has been passed abolishing the office of the Board of Quarantine Commissioners of the Port of New York, and imposing their duties on the Health Officer of the Port of New York, Dr. Alvah H. Doty. Dr. Doty has been allowed such assistants as he needs and it is estimated that the work of the quarantine station will now be carried on at about one-half the expense hitherto incurred.

Increase in Insanity.—The sixteenth report of the State Charities Aid Association records the largest increase of insanity in the history of the state. There were in the state hospitals and licensed institutions 30,507 persons, an increase of 1,414 over the previous year. In the previous ten years the average annual increase was 714. In discussing this apparent increase in the number of cases of insanity, Drs. Frederick Peterson, Charles L. Dana, Allan Fitch and Carlos F. MacDonald were of the opinion that the increase was more apparent than real. There was a greater trust in the hospitals and willingness to entrust patients to the state asylums than formerly. Patients are much better cared for than formerly and live longer and this has a tendency to keep a larger number in institutions. Patients were also sent to the hospitals sooner than formerly in the belief that early treatment was more likely to be curative. The migration was no doubt responsible for a part of the statistical increase.

New York City

Money to Combat Tuberculosis.—Mr. Frederick T. Martin has given President Nicholas Murray Butler of Columbia University $10,000 which he had collected personally for the purpose of combating tuberculosis.

Personal.—In recognition of his services to the Yorkville Dispensary and Hospital for Women and Children, Dr. Herman B. Sheffield was recently presented by the medical staff of the hospital with an electrolier and stand.

Vacancy in Clinic.—The position of first assistant and chief of clinic in the night genitourinary clinic of the West Side German Dispensary is now vacant. Applicants may address Dr. A. L. Wolbarst, 105 E. Nineteenth street, stating experience, etc.

Annual Lecture.—The governors of the New York Skin and Cancer Hospital announce that Dr. William Seaman Bainbridge will give the fifth annual lecture on malignant disease with presentation of patients, in the out-patient hall of the hospital, Second avenue and Nineteenth street, May 12, at 4:15 p. m.

Tuberculosis Exhibition Opened.—The committee of the Charity Organization Society on the prevention of tuberculosis has opened its free traveling tuberculosis exhibition at Fifth avenue and Fourteenth street. Some one is always on hand to answer questions. Lectures are given at noon two or three times each week and literature is distributed freely.

To Protect Life and Limb.—The Commission of Public Service has issued an order compelling street railways to equip their surface cars with fenders and wheel guards. In the report accompanying this order it was stated that accidents on the street railway system during the fiscal year had reached the number of 54,481, that 444 persons had been killed and 2,591 seriously injured.

Still Oppose Consumptives' Hospital.—The Staten Island members of the Board of Aldermen have protested against the appropriation of $1,350,000 corporate stock for the Sea View Hospital for Consumptives. They have always been opposed to having this institution on Staten Island. The hospital has been built and this money was intended for equipment. The resolution was finally voted down.

Gifts to University.—The Council of the New York University has accepted the gift of $75,000 from Andrew Carnegie in honor of the successful work done in bacteriology and pathology during the past twenty-five years by the Carnegie Medical Laboratory. This fund will be applied to the extension of the present Carnegie Laboratory Building.——The widow and daughter of Glover C. Arnold have made a gift of $2,000, the income of which is to be awarded each year to the member of the graduating class of the University and Bellevue Medical College who shall stand highest in surgery.

Physicians Summoned.—In the case of the New York County Medical Society against the Dr. Week's medical office, which was summoned to appear on the charge of practicing medicine without a license on the complaint of the medical society, subpenas were served on several physicians. The attorney for the defendant claimed that his purpose in doing this was to test the constitutionality of the state statute which gives the fines imposed for convictions of offenses against the medical laws to the New York Medical Society. The subpenaed physicians did not appear, but in their stead

the attorney for the County Medical Society was present. The defendants were discharged on their own recognizance.

Dr. Ordronaux's Bequests.—The executors of Dr. John Ordronaux's estate have filed their accounting. Under the will Dartmouth College receives $30,000; the University of Vermont, $10,000; Trinity College, $10,000; Nassau Hospital Association of Mineola, $6,000; the Society for the Relief of the Destitute Blind of New York City, $5,000; the Episcopal Diocese of Long Island, $5,000; the Children's Society of New York, $5,000 for use of its summer charities; the George Washington University of Washington, $5,000; the Columbia Law School, $5,000 to be used for yearly prizes; and the Episcopal Diocese of New Hampshire, $5,000

NORTH CAROLINA

Personal.—Dr. John A. Pollock, Kinston, has resigned as surgeon general N. C. N. G., and Dr. Robert S. Young, Concord, has been reappointed. This is his third term in that position.——Dr. Chase P. Ambler, Asheville, has declined the republican nomination for mayor of that city.

Commencement.—The annual commencement exercises of the North Carolina Medical College, Charlotte, were held April 26, when a class of 19 was graduated. The address to the graduating class was delivered by Dr. Lewis B. McBrayer, Asheville, and the diplomas were presented by the president, Dr. J. P. Monroe.

NORTH DAKOTA

State Association to Meet.—The North Dakota State Medical Association will meet for its annual session in Fargo May 11 and 12, under the presidency of Dr. Henry A. Beaudoux, formerly of Fargo, but now of St. Paul.

Antituberculosis Association Organized.—The North Dakota Antituberculosis Association has been incorporated by Mrs. E. B. Quain, A. P. Lenhart, Dr. G. A. Rawlings, Bismarck, and Dr. James Grassick, Grand Forks, president of the State Board of Health.

April Vital Statistics.—During April there were reported 653 births and 232 deaths. There were reported during the month 59 cases of diphtheria with 4 deaths, 58 cases of smallpox with no deaths, 55 cases of scarlet fever with 4 deaths, 9 cases of tuberculosis, and 15 cases of typhoid fever with 2 deaths.

PENNSYLVANIA

Nurses' Bill Signed.—The Nurses' bill was signed by Governor Stuart May 1. One year from that date it will be unlawful for any person to use the title of "registered nurse" except by the authority of a certificate issued by the State Board of Examiners for the Registration of Nurses. Nursing by persons not equipped with such certificates is not prohibited, but they must refrain from representing themselves as registered nurses. The examining board is to consist of three physicians and two graduate nurses. Two of the physicians must be connected with a hospital maintaining a training school for nurses.

Philadelphia

Failed to Report Births.—Four physicians and three midwives, who were tried before the Magistrates' Court, April 29, charged with failure to report births within ten days, as required by law, were found guilty and fined the costs of the case.

Dispensary Opened.—A new dispensary for the treatment of tuberculosis was opened in the northern section of the city April 22. The new institution will be under the general supervision of Dr. Alfred Stengel, and Dr. W. C. Turnbull will have direct charge of the work.

Hospital Ex-Internes Meet.—The annual meeting and banquet of the Association of Ex-Resident Physicians of the German Hospital was held May 7. The following officers were elected: President, Dr. Henry F. Page; secretary, Dr. John C. Gittings, and historian, Dr. A. P. Miller.

Money for Hospitals.—An anonymous gift of $25,000 has recently been made to the Episcopal Hospital.——The will of the late Henry Harmer contains a provisional bequest of $3,500 to the Home for Consumptives at Chestnut Hill.——The will of the late Edwin N. Benson bequeaths $50,000 to the Pennsylvania Hospital and $10,000 to the Chestnut Hill Hospital.——Provisional bequests from an estate valued at $61,000 to the Episcopal Hospital, Philadelphia Home for Incurables and Home for Consumptives are contained in the will of the late Fannie B. Shoemaker.

Personal.—Dr. J. Leslie Davis has been appointed otologist and laryngologist to St. Agnes' Hospital to succeed Dr. Nathan G. Ward, resigned.——Dr. A. Donaldson Smith has been appointed United States Consul at Patras, Greece.——Dr. Randall C. Rosenberger, newly-elected professor of bacteriology and hygiene in Jefferson Medical College, was tendered a testimonial dinner by his colleagues, May 1. Dr. Thomas J. Buchanan was toastmaster.——The James A. Meigs Medical Association tendered a reception and dinner, April 29, to Dr. Albert P. Brubaker, who was recently elected professor of physiology in Jefferson Medical College.

SOUTH CAROLINA

Commencement Exercises.—The annual commencement exercises of the Medical College of the State of South Carolina, Charleston, were held April 28, when a class of 36 was graduated. United States Senator E. D. Smith delivered the address to the graduates.

Bacteriologic Laboratory to Be Established.—The State Board of Health, at a meeting in Summerville, April 20, decided to establish a bacteriologic laboratory in Columbia, and Drs. Charles F. Williams and William Weston were appointed a committee to arrange for the institution.

Loving Cup Presented.—A silver loving cup bearing the following inscription: "Presented by the citizens of St. Matthews to the skilful physician, the faithful friend, the devoted Christian, and to their 'Grand Old Man' whose life is an inspiration, whose presence is a benediction. His people love him," was presented by citizens of St. Matthews to Dr. William Lewis Pou on the occasion of his eightieth birthday anniversary. The presentation was made by Rev. D. D. Dantzler Orangeburg.

Hospital Transferred.—Arrangements were completed April 13, for the transfer of the Columbia Hospital, value $75,000, to an association of Columbia physicians. The new organization has adopted a constitution and by-laws and elected the following officers: President, Dr. Dargan S. Pope; vice-president, Dr. Leonard K. Philpot; secretary-treasurer and superintendent of the hospital, Dr. A. Earle Boozer, and executive committee, Drs. Le Grand Guerry, Lewis A. Griffith, Samuel E. Harmon, Theodore M. DuBose, William Weston and Lawrence B. Owens.

Personal.—Dr. John J. Kirksey, Saluda, has been elected president of the Saluda County Antituberculosis Association.——At the annual meeting of Laurens County Medical Society, March 22, Dr. William D. Ferguson, Laurens, was elected president, vice Dr. Samuel F. Blakely, Ora, and Drs. Jesse H. Teague, Laurens, and Thomas L. W. Bailey, Clinton, were elected delegates to the state medical association.——Dr. Lewis A. Griffith has been elected health officer of Columbia.——Dr. John L. Dawson has been re-elected vice-chairman; Dr. John M. Green, secretary, and Dr. Robert Wilson, Jr., bacteriologist of the Charleston Board of Health.

State Society Meeting.—The South Carolina Medical Association held its sixty-fifth annual session in Summerville April 20 to 22, and voted to meet in Laurens next year. The following officers were elected: Dr. John L. Dawson, Charleston, president; Drs. Frank H. McLeod, Florence; Charles M. Rees, Charleston, and Augustus H. Hayden, Summerville, vice-presidents; Dr. Walter Cheyne, Sumter, secretary; Dr. Charles P. Aimar, Charleston, treasurer; and Drs. Joseph Maybank, Charleston, first district; Henry G. Eleazer, Peak, second district; R. Andrae Bratton, Yorkville, Fifth District; Joseph J. Watson, Columbia, Seventh District, and Dr. A. Earle Boozer, Columbia, at large, to fill vacancies in the Regular Board of Medical Examiners. Dr. J. Wilkinson Jervey, Greenville, was re-elected editor of the journal of the association.

TENNESSEE

Colleges Will Not Consolidate.—At a meeting of the faculty of the Medical Department of the University of Nashville, April 20, it was decided that the proposed merger between the Medical Department of Vanderbilt University, the University of Tennessee, and the University of Nashville should not be entered into at present, and that the existing conditions will be continued.

Office Building for Physicians.—On the site of the house of the late Dr. N. D. Richardson, which was afterward the home of Dr. John A. Witherspoon, an office building is to be erected exclusively for the use of Nashville physicians. The Parkes Building Company will erect this building, which will be six stories high, 50 by 114 feet, of reenforced concrete and steel construction.

College Applies for Charter.—Plans which have been in progress for some time to make the College of Physicians and Surgeons the nucleus for the University of Memphis, were publicly announced April 7. They contemplate consolidation of

the proposed university with the present College of Physicians and Surgeons, and the establishment of a college of pharmacy, and a college of dental surgery within a short time, and other departments as rapidly as they can be organized.

Graduating Exercises.—The annual commencement of the Tennessee Medical College, Knoxville, was held April 30, when degrees were conferred upon a class of 13 by General O. O. Howard. The doctorate address was delivered by Rev. Heber D. Ketcham, D.D.——At the twentieth annual commencement exercises of Chattanooga Medical College diplomas were given to a class of 24. The speakers of the evening were introduced by the dean, Dr. John R. Rathmell. Dr. German P. Haymore delivered the faculty address. An address was also delivered by Rev. A. R. Riker, Moundsville, W. Va., on the "Modern Idea of the Necessity of Scholastic Preparation for Entering the Professions," and the Hon. George W. Ochs, Philadelphia, delivered the commencement address.

VIRGINIA

Sanitarium Burns.—The Mecklenburg Hotel and Sanitarium at Chase City, valued at $200,000, and insured for $75,000, was destroyed by fire April 16.

Personal.—While cranking his automobile April 26, Dr. Edward H. Claude, Portsmouth, sustained a compound fracture of the right arm.——Dr. James M. Whitfield, chemist to the board of health, Richmond, will probably be the first incumbent of the new position of city chemist.

Hospital Notes.—The four Richmond hospitals doing charity work, namely, Memorial, Virginia, Retreat for the Sick and Sheltering Arms, have combined into an organization known as the United Hospitals, the object of which is to furnish charity work done by all at present, and to give other organizations a chance to contribute.——More than $7,000 has thus far been raised at Harrisonburg for the establishment of a hospital in that place.

Society Meeting.—At the eighth annual meeting of the South Piedmont Medical Society, held in South Boston April 22, the following officers were elected and installed: President, Dr. James S. Irvin, Danville; vice-presidents, Drs. Charles H. Gibbs, Charlotte Court House; W. Macon Smiley, Houston; William J. Innis, Brookneal, and Julian McG. Robinson, Danville; secretary, Dr. George A. Stover (re-elected), and treasurer, Dr. James L. Kent, Lynchburg.

WASHINGTON

Medical Building.—The Cobb Building, to be erected by the Metropolitan Building Company at Fourth Avenue and University street, Seattle, is to be devoted exclusively to the use of physicians and dentists.

Clean-Up Campaign.—The state commissioner of health has made an inspection trip of the cities of Puget Sound to determine the prevalent sanitary conditions, with especial reference to the prevention of bubonic plague.

Chehalis Physicians Take Cards from Newspapers.—Eleven members of the Chehalis County Medical Association have agreed to discontinue the insertion of professional cards in certain local journals because the latter are said to have accepted and published advertisements exploiting medical fakers and quacks.

New Marriage License Law.—A new state marriage license law has been enacted, which goes into effect June 14. After that date each applicant for marriage license will have to present a certificate from a reputable physician showing that both contracting parties to the proposed marriage are mentally and physically sound, and in addition must produce two witnesses who will subscribe under oath that they have known the prospective bride and groom for at least two years.

Personal.—Dr. Elmer E. Heg, Seattle, secretary of the State Board of Health, has been appointed state commissioner of health.——Dr. William L. Ludlow, Seattle, has been chosen physician of King county.——Dr. Rose A. Bebb, Seattle, bacteriologist of the State Board of Health, has resigned.——Dr. Frank P. Witter, Spokane, has been elected a member of the State Board of Medical Examiners.——Dr. Thomas Tetreau, North Yakima, has been continued as physician of Yakima county and city health officer.——Drs. Orville L. Adams and George W. H. Moore, Davenport, have been elected delegates from the Lincoln County Medical Association to the state association, and Drs. Lee Ganson, Odessa, and Joseph I. Kaulbach, Edwall, alternates.——Dr. Nils A. Johanson has been appointed a member of the municipal civil service medical examining board, vice Dr. John P. Sweeney, term expired.

WISCONSIN

Personal.—Dr. W. F. Dearborn, assistant professor of educational psychology in the University of Wisconsin, has resigned to take a similar positon in the University of Chicago.——Dr. William J. Griffin, Ashland, sailed from New York for Europe, March 30.——Dr. John E. Meany has been reappointed health officer of Manitowoc.——Dr. George P. Barth has been appointed examining physician of the public schools of Milwaukee.——Dr. George L. Nicklas, Platteville, announces that he is about to retire from practice.

GENERAL NEWS AND COMMENT

Any One Allowed to Treat Leprosy and Tuberculosis.—The leprosy bill passed its third reading in the Hawaiian legislature April 14. It permits any one to treat leprosy, asthma and tuberculosis after regular physicians have decided the case hopeless.

Medical Member of Liberian Commission.—Dr. Percy M. Ashburn, U. S. Army, has been made a member of the commission appointed to go to Liberia to study conditions there, with a view of improving the management of the affairs of the republic, and providing better for its maintenance and integrity.

Delegates to Chemistry Congress.—The state department has approved the attendance of the following American delegates at the International Congress of Applied Chemistry to be held in London this month: Drs. Harvey W. Wiley and Allerton S. Cushman of the Department of Agriculture; Dr. Frank C. Clark, United States Geological Survey; Drs. Charles Baskerville, York; William H. Nichols, Maxmilian Toch, Herbert Plant and Morris Loeb, New York City, Dr. William L. Dudley, Nashville, Tenn., and Dr. L. H. Baekeland, Yonkers, N. Y.

Alumni Election.—At the annual home-coming week of the University of Pennsylvania, the medical alumni held their annual meeting and dinner, at which the following officers were elected: President, Dr. Wharton Sinkler, Philadelphia; vice-presidents, Drs. Allen J. Smith, James B. Walker and George A. Piersol, Philadelphia; Dr. Alonzo E. Taylor, San Francisco; Dr. Theodore Diller, Pittsburg; Dr. George W. Guthrie, Wilkesbarre, Pa., and Dr. Edward Jackson, Denver; secretary-treasurer, Dr. Edward A. Shumway, Philadelphia, and historian, Dr. Roland G. Curtin.

Examination for Army Medical Corps.—The Surgeon General announces that preliminary examinations for appointment of first lieutenants in the medical corps of the Army will be held July 12, at points later to be designated. Applicants must be between 22 and 30 years of age, graduates of an authorized medical school, and must have had at least one year's hospital training or its equivalent. The appointment of first lieutenant carries with it an initial salary of $2,000 per annum, in addition to quarters, mileage, privilege of retirement, etc. Application for information regarding the examination should be made to the Surgeon General, U. S. Army, Washington, D. C.

The Carroll Fund.—The following subscriptions have been received since the last report:

Previously reported	$3,446.35
Dr. George Homan, St. Louis	10.00
Dr. Myles Standish, Back Bay, Boston	10.00
Dr. William B. Wherry, San Francisco	2.00
Dr. F. N. Mead, Cedar Falls, Iowa	1.00
Dr. M. Manges, New York City	5.00
W. W., New York City	5.00
Dr. Richard M. Pearce, New York City	2.00
Dr. Herman G. Klotz, New York City	2.00
Dr. H. Kugeler, San Francisco	5.00
Dr. Lewis E. Maire, Detroit	1.00
Officers of the Medical Corps	179.00
	$ 222.00
Total amount subscribed	$3,668.65

The sum of $3,800 is still necessary to raise the mortgage on this property. This would be a small contribution for the medical profession to make to the memory of one of the representatives of the commission that did so much for the glory of the profession and for the good of the country. Send all contributions to Major M. W. Ireland, Surgeon General's Office, War Department, Washington, D. C.

Warren Prize.—Dr. Frederick A. Washburn, resident physician in the Massachusetts General Hospital, Boston, announces that the Warren Triennial Prize for 1910 is to be on some one special subject in physiology, surgery or pathology. The dissertation must be either in English, French or German, and must be typewritten and suitably bound. No work that has been previously published will be considered in competition. The name of the writer must be enclosed in a sealed envelope, on which must appear a motto corresponding with one on the

accompanying dissertation. The amount of the prize for 1910 is $500. Dissertations will be received until April 14, and high value will be placed on original work.

February in the Canal Zone.—The report of Col. William C. Gorgas, Medical Corps, U. S. Army, chief sanitary officer of the Canal Zone, calls attention to the death rate of 10.98 per 1,000 for February among employés, which is the lowest rate since the beginning of work in the Canal Zone. The February death rate for 1906 was 43 per 1,000; for 1907, 25.62 per 1,000, and for 1908, 12.72 per 1,000. A similar marked reduction is noted in the death rate in the entire population of the Canal Zone, which has decreased from 40.20 per 1,000 in 1905 to 18.59 per 1,000 in February, 1909. The amount of illness among employés has decreased from 1,116 daily in January to 951 daily in February. During January there were admitted to the hospital 1,258 employés ill with malaria, and during February only 852. During the month no case of yellow fever, plague, or smallpox occurred on the isthmus.

CANADA

Graduating Exercises.—At the graduating exercises of the Medical Faculty of the Western University, London, Ont., April 23, a class of 26 was graduated.

Subscription for Tuberculosis Hospital.—Citizens of Brantford have subscribed $7,000 of the $15,000 required for the establishment of a hospital for the treatment of tuberculosis in that city.

Nostrums Must Be Stamped.—The order has been passed in the council extending from April 15 to May 15, the time allowed for the issuance of stamps by the internal revenue department to be placed on proprietary medicine manufactured prior to April 1, in compliance with the act respecting proprietary medicines passed by parliament at the last session.

Personal.—Dr. John W. McEachern has been elected president, Dr. James D. Lafferty first vice-president, Dr. William A. Lincoln secretary, and Dr. W. E. Graham treasurer of the Calgary (Alba.) Moral and Sanitary League.——Dr. Fred Jeffery has been appointed chief of the resident staff of the Victoria Hospital, London, vice Dr. Ray Holmes.——Dr. James Mills, Toronto, who was operated on at the Cottage Hospital, April 8, is convalescent.——Dr. George A. Armstrong, Montreal, has returned from Europe.

Honor Professor Wright.—The pupils and colleagues of Prof. Ramsey Wright of the University of Toronto, celebrated the twenty-fifth anniversary of his work as professor in the University April 15 by tendering him a complimentary banquet. The chair was taken by Prof. J. Playfair McMurrich. The toast to the university was presented by Prof. T. R. Lillie of the University of Chicago, and that to the guest of the evening by Dr. T. McCrae of Johns Hopkins University, and an address was presented to Professor Wright by Prof. A. B. MacCallum.

Coming Tuberculosis Conference.—The ninth annual meeting of the Canadian Association for the Prevention of Tuberculosis is to be held in Hamilton May 19 and 20. The chief subjects for discussion are "The Duty of Municipalities in Reference to Tuberculosis," by Dr. White of the Pittsburg Sanatorium; "How One Can Do Most Good in Arresting Tuberculosis at the Smallest Outlay," by Dr. George J. Adami, Montreal; and "The Duty of the People Toward the Movement for the Extermination of Consumption," in which a number of physicians and laymen will participate.

FOREIGN NEWS

Fifth International Congress for Radiology.—The last congress for medical electrology and radiology, held at Amsterdam last September, voted to hold the next congress at Barcelona in Spain, and the date has been fixed as September 13 to 18, 1910. The committee of organization is already at work, with D. Luis C. Salse as president of the committee and congress and D. C. C. Llaberia as secretary, both of Barcelona.

Prison Term for Alleged Malpractice by Prominent Italian Surgeons.—The profession in Italy is in a ferment on account of the sentence recently passed on Professor Galeazzi, chief of the Milan Orthopedic Institute, and his assistant, Anzoletti, condemning them to two and a half months in prison and a fine of about $17 on account of the death of a patient from gangrene after application of a plaster cast for fracture of the pelvis. The medical experts for both sides agreed in ascribing the gangrene to thrombosis in the local veins, but the experts for the parties bringing the suit ascribed the phlebitis to undue pressure from the cast, while those for the defense ascribed it to the effects of the trauma causing the fracture. The latter it seems was not discovered for a week, and the leg had been used a little in the mean time. Italy takes a high rank for orthopedic work, and the Milan institute stands about at the head. The patient in question was a prominent local lawyer, and the *Gazzetta degli Ospedali* remarks that it stands to reason that physicians with such a high reputation for skill and devotion would not be guilty of gross negligence for the first time in such a particularly important case. A number of medical societies have passed resolutions since urging the necessity for reform in the system of medical expert testimony to prevent such a spectacle as the contradictory testimony in this case. They protest against the system which allows an incompetent judge or jury to decide questions that tax even specialist skill and experience. They call on all the medical associations to aid in the effort to secure legislation organizing a "board of medical experts," a *collegio peritale*, which some have been advocating for a long time, to be made up of men whose skill, judgment and impartiality are known to be above all question. The various resolutions adopted are being published in the *Policlinico*, in turn. The *Gazzetta degli Ospedali* of April 15 gives the views of a leading lawyer on the above case, citing the Roman law on malpractice. The "Aquilian law" of damage outside of a contract holds to conduct "becoming a good father of a family." The limit of responsibility is the conduct of a *bonus pater familias*, representing the average good father in the social status in question. The responsibility of the physician is that of the average diligent doctor among his peers. The article adds that the movement of modern life and civilization would be impossible if no act were done except those from which all possible chance of injury has been eliminated with scientific precision. There must be some limit to this exclusion of possibility of damage, and the "Aquilian law" can not apply to all the remote and even infinite limits of the fortuitous case. Where to establish these limits, and how far to stretch the law to apply to them is for the court to decide. For this decision it is necessary to bear in mind the two extremes: on the one side, the solicitude for the patient which should be more scrupulous than any contract could call for; while on the other side, it is evident that this scrupulousness can not be carried to such a point as to take away all means of livelihood or participation in the work of society.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, April 24, 1909.

The Antituberculosis Campaign

At a meeting of the General Council of the Women's National Health Association of Ireland, the wife of the Viceroy, Lady Aberdeen, disclosed a new scheme in the antituberculosis campaign. There are dotted round the coasts of the United Kingdom 68 coastguard stations, placed there for the prevention of smuggling in former times. Modern conditions of commerce, the introduction of steam, etc., has rendered them useless for this purpose, though some of them are used by the admiralty for signaling purposes. It has been decided to convert them into sanatoria for patients suffering from tuberculosis, for which purpose they can readily be adapted. They are commodious, well built, and situated in salubrious localities.

Under the auspices of the National Association for the Prevention of Tuberculosis a popular and educational tuberculosis exhibition has been opened in the east end of London at Whitechapel. It is intended to move the exhibition to other poor districts. The object is by models, diagrams, specimens, and other means, to show to the people the nature of tuberculosis, the extent of its ravages, the possibility of its prevention and arrest, and the methods by which these objects are attained.

The local government board has issued a report by Dr. Eastwood on the American methods for the control of the milk supply. A number of the methods are considered worthy of adoption here. Dr. Eastwood recommends that dairy cows with advanced or generalized tuberculosis should be destroyed, and that milk not provided with a reasonable guarantee of production under sanitary conditions should be excluded from cities. A regulation requiring all milk to be sold under one of three designations, viz., raw, Pasteurized, or officially certified, would be helpful. The possibilities of producing a certified milk on a financially successful basis have not yet been exploited fully. Municipal enterprise in the production of certified milk for the purpose of improving the physique of the poorest class is considered worthy of consideration.

Death Under Chloroform and Workmen's Compensation

Another new point has arisen under the workmen's compensation act. A man in the employment of calico-printers met with an accident. His hand was caught between two rollers and badly crushed. An expectant treatment was adopted and two months later skin grafting was necessary in order to prevent contraction which would have rendered the hand rigid and practically useless. This was done under chloroform and the patient died. The widow applied for compensation but the judge dismissed the claim. An appeal was made to a higher court which reversed the judgment. The principal judge said that it was admitted that the deceased was bound to undergo an operation of some sort. The usual operation would have been amputation of the hand which would have involved administration of an anesthetic and if the man had died counsel for the respondents admitted that the employers would have been liable. Instead of this a skilful surgeon performed an operation which would preserve the hand and render the man not maimed for life but able-bodied, and so relieve his employers from liability. The step taken by the workman in submitting to the operation was not only courageous but in the interest of his employers. The case was therefore sent back to the lower court for the assessment of the amount of compensation.

The Education of Mothers

A novel form of legislation has been introduced into the House of Commons. It proposes to empower local sanitary authorities to assist necessitous women before and after childbirth. The object is to reduce infant mortality by feeding, supervising and instructing poor, ignorant mothers. The local authority is given power to provide food, advice and other assistance for the mother before and for six months after the birth of the child. As a condition it may insist on the mother nursing the child, attending a class for instruction, or refraining from working. The proposal is founded on the experience gained at Ghent where infant mortality was very high. A local physician, Dr. Miele, started a school for mothers, where women of the working class were given advice and instruction before and after labor and encouraged to suckle their children. The municipality gave a grant of $300 a year to the work and it was found to be much better to feed the mother and encourage her to suckle her child than to facilitate bottle-feeding by supplying humanized milk. The example of Ghent was followed by one of the poorer boroughs of London, St. Pancras, where, as has been stated in a previous letter (THE JOURNAL, July 20, 1907, xlix, 253), a school for mothers was founded and led to a great reduction in infant mortality.

The Causation of Dental Caries

The condition of the teeth of our people is appalling; dental caries is practically universal. Investigation shows that at the age of 6 years nearly 100 per cent. of children have carious teeth and that on an average nine teeth are affected. The permanent teeth also rapidly decay; at the age of 14, 85 per cent. of children have caries, and afterward this percentage gradually rises so that only 5 per cent. of adults have a perfect set of teeth. The causes of this deplorable condition have been much discussed in the last few years. Two authorities, Dr. Mary Campbell, who may be described as the most philosophic physician of the day, and Dr. Sim Wallace, a well-known dentist, have urged that the decay of the teeth is due to a faulty mode of diet. Dr. Campbell, who is the author of a monumental work on the evolution of man's diet, has found that before the discovery of cookery little crude starch was taken and this was entangled in a cellulose network which needed abundant mastication. This necessitated an active use of the jaws which tended to their healthy growth and development. Until the agricultural period (which was long after the discovery of cookery) the only source of sugar other than the limited supply of fruits was wild honey. Now man has not only vastly increased his supplies of sugar and starch, but he consumes practically the whole of it in a liquid, pappy, spongy or pultaceous form. This gives the teeth little or no work. Dr. Campbell recommends that when a child begins to cut its teeth it should be given cautiously solid food for which obviously the teeth are intended. The infant should be given well-baked bread-crust which will compel mastication, and chop and chicken-bones to gnaw. Dr. Sim Wallace recommends similar food for infants and for school children, crisp toast, baked bread, or crusty rolls instead of the ordinary white bread. He also recommends that meals should be arranged so that dessert always follows sweets, for fresh fruit cleans the mouth.

Graduated Labor in the Treatment of Tuberculosis

The value of graduated labor in the treatment of pulmonary tuberculosis was pointed out a year ago by Dr. M. S. Paterson, medical superintendent of the Brompton Hospital Sanatorium at Frimley. At the annual meeting of the Royal National Hospital for Consumption, the president, Lord Rosebery, bore striking testimony to the success of this treatment. Many patients had gone through the course of graduated labor with the most satisfactory results. He read the following speech made at the recent Christmas dinner by a patient: "Whatever we may have to put up with in the way of discipline, I know the day will come when we shall be thankful to have undergone it, because of its benefits. I came to the hospital four months ago a wreck, and being given two tens (exercise for ten minutes twice daily) found it quite enough. Now I am doing navvy's work in the quarry, shoveling, sifting and taking barrow loads of stone weighing a couple of hundredweight—heavier work than I have ever done. My weight has increased from 132 pounds to 156 pounds and I am better in health than I have ever been in my life. This is the result of plenty of good plain food, open air and the discipline I have spoken of, and I am only one of hundreds."

A Medical Degree for London Students

The medical degree of the London University is obtained by a very difficult examination which is beyond most London medical students, who generally content themselves with obtaining the combined diploma of the Royal Colleges of Physicians and Surgeons (L.R.C.P., M.R.C.S.). They are unable to use the letters M.D. and are not entitled to be called "Doctor," but are styled "Mr." though the distinction is often not observed, especially by the masses. On the other hand many graduates of the provincial Scotch and Irish universities practice in London and in England generally, who are of course "M.D.'s" and entitled to the designation of Doctor. The majority of the London students are therefore in a position of titular inferiority to these, and though a man's ability as a practitioner is by no means always estimated by his qualification, the fact that he is not strictly entitled to the designation of "Doctor" is some disadvantage in general practice. Now it is contended that the requirements for the conjoint diploma are as stringent as those of many of the universities outside London and that the London students are placed unfairly at a disadvantage. The problem has therefore existed for some years of giving an opportunity of obtaining the coveted medical degree to every student who is worthy of it, but the difficulties have so far been insuperable. The London University has naturally been unwilling to lower its high standard which has given it a pre-eminence over the provincial universities, and the colleges of physicians and surgeons, not being universities, have been unable to grant a degree, which is a university distinction. Some scheme, however, appears now to be in sight. Delegates appointed by the colleges have produced a draft scheme for establishing a joint examination with the University of London. It is suggested that the university should retain all its existing rights as to the granting of degrees but should consent to exercise them as regards pass degrees conjointly with the colleges so far as those students are concerned who shall have complied with such conditions as the university and the colleges may determine. Thus the university would continue to grant independent degrees, which might be designated as "honors" degrees, thus meeting the views of those who maintain that the present degrees of the university are of an "honors" standard.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, April 22, 1909.

The Reactions of Revaccination

Before the Academy of Medicine, April 20, Professor Kelsch, director of the Superior Institute of Vaccine of the academy, made in his own name and in that of his collaborators, Camus and Tanon, a communication on revaccination and its effects. Very frequently when a revaccination does not show at the point of inoculation a pustule equally defined with that of a primary vaccination, one is led to believe that it has been ineffective. Again, besides the classical pustule, there are other manifestations of vaccinia: the papulo-vesicle, the papule and the macule, reddish and slightly indurated. These papules and macules are more prompt to manifest themselves, but at the same time they are more fugitive than the frank papule of the

first vaccination. They must, therefore, be observed very closely, for if the subject is examined five or six days after the revaccination there is a risk of their prior disappearance. They are not, as is sometimes thought, local inflammatory reactions, due to the prick and coming from the microbes of the vaccine or from the skin of the subject, but they constitute real manifestations of vaccinia.

The statistics of revaccination, therefore, must take into account these very important results, and not rest content with mentioning simply positive or negative results. Fresh ministerial instructions, moreover, have taken note of this. The results of revaccination will appear in a form that will be more conclusive when a precise description of the characteristic lesions obtained is mentioned.

The statistics furnished by Professor Kelsch, based on 2,683 revaccinations made between July 1, 1905, and April 5, 1909, have given for 1,539 cases that it has been possible to follow up, 37 pustules of the type of primary vaccination; 315 papulo-vesicles; 912 papules; 169 macules, reddish and slightly indurated. In 108 cases only there has been no reaction, which gives a truly minimum proportion of 6 per cent. of failures.

Kelsch and his collaborators have demonstrated that the organism, far from becoming refractory to the impressions of the vaccine by successive inoculations, is, on the contrary, rendered hypersensitive—anaphylactized; frequently the more the subject has been revaccinated, the more precocious and the lighter are the manifestations of the vaccine, in accordance with the law of anaphylaxis. It is of importance that the public should be made acquainted with the principal forms of the eruption induced by vaccinal reinoculation, for many persons refrain from revaccination in the belief that they are refractory because it does not produce pustules in them.

Dr. Roux, director of the Pasteur Institute, is in accord with this belief, and thinks that it would be opportune to publish illustrations representing exactly all the cutaneous reactions consequent on revaccination. Such an atlas would be of great general utility.

The Laboratories of the Paris Hospitals

The Municipal Council of Paris has decided to raise the subsidies for medical studies, in order to improve the work of the laboratories of the hospital services of the city of Paris; but the increase voted at the end of the year being insufficient, a new credit is about to be given to the chiefs of medical staffs (*médecins chefs de service*). The sum total of 17,500 francs is to be so used. Among the services designated to profit by the subvention is that of Dr. Béclère, who has created a laboratory intended, first, for the examination of patients by radioscopy and radiography; second, for the treatment of suitable cases by radiotherapy and radiumtherapy; third, to the study of medical radiology, which has been taught there daily for ten years. Dr. Béclère has, moreover, collected a most complete library of radiology, in which are to be found all the French and foreign publications relative thereto, as well as a museum containing mouldings (*moulages*) of cases before and after treatment. The subvention will also be granted to Dr. Pierre Marie, physician to the Hôpital Bicêtre, to enable him to pursue his studies on the pathologic anatomy of aphasia. Another subvention is to be granted to the laboratory at the Hôpital Saint-Louis, which forms an important school for dermatologic studies. Thanks to this grant, other hospitals—Lariboisière, Tenon, Bichat, Andral, the Hospital for Sick Children, Trousseau, Necker—will be able to perfect their radiographic services.

International Conference on Cancer

The bureau of the International Congress on Cancer assembled at Berlin, has decided that the next International Conference on Cancer shall meet at Paris, at the end of September, 1910. It will probably be presided over by Professor Bouchard.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 14, 1909.

Examination for Dentists

The regulations for the examination for licensing of dentists, which will not be published officially for several weeks, are as follows: Before taking the examination for a dentist's license, the candidate must pass a preliminary examination. The candidate for the preliminary examination must prove that he has graduated from a German secondary school (*Gymnasium, Realgymnasium* or *Oberrealschule*) and that he has attended a dental school of the German Empire at least three half years since graduation from the secondary school. The examination includes anatomy, physiology, physics, chemistry and dental mechanics and occupies nine days. The candidate for the dental examination must show that he has passed the preliminary examination, has studied at dental institutes of the German Empire at least seven half years, and at least three years after having fully passed the preliminary dental examination, he has taken a clinical course of at least two half years on the conservative treatment of the teeth and a course of equal length in mechanical dentistry, has attended regularly a policlinic for diseases of the teeth and mouth, for three months each has attended the clinic or policlinic for diseases of the skin and syphilis, and has taken a course on methods of clinical examination. The parts of the examination in which the candidate has failed may be taken again after from two to six months at the option of the licensing board. Any one who does not pass the second examination is not admitted to a further examination. A medical license granted by the German Empire entitles the holder to take the dental examination on furnishing proof that for at least two half years he has taken a course in dental mechanics and a clinical course in the conservative treatment of the teeth and has regularly attended a policlinic for diseases of the mouth and teeth. At the dental examination he need only pass the examination in diseases of the mouth and teeth, in the conservative treatment of the teeth, and in the surgery of the mouth and teeth and in mechanical dentistry, in addition to the prescribed examination in mechanical dentistry of the preliminary dental examination.

Certificates for Quacks and Nostrum Makers

Quacks and patent medicine manufacturers often attempt to secure greater credibility in the eyes of the public for the testimonials for their alleged cures by obtaining a certificate of the genuineness of the signature of the patient, given by police authorities, mayors or other officials. The official certificate in these cases is frequently given in such a form as to create the impression that it guarantees the genuineness of the entire contents of the testimonial which is naturally very advantageous for fraudulent purposes. The ministers accordingly direct that as it is very undesirable in the interest of the public health that the business of quacks and nostrum dealers so injurious to the public should be promoted by the officials, even in appearance only, the officials in testimonials of this sort shall distinctly confirm the genuineness of the signature merely and avoid every other interpretation of the certificate.

The Campaign Against Alcoholism

By ministerial order of March 3, the distribution of leaflets for instruction regarding alcoholism is directed. These leaflets are to be distributed by the vaccinators with the certificate of vaccination and also by the district physicians in their visits to schools and conferences with teachers. The leaflets are furnished at the rate of 50 cents per 1,000 by the business station of the German association against the misuse of spirituous beverages. In a communication to the German Aerzte-Vereinsbund the supreme lodge of the order of Good Templars opposes the giving of medical recommendations of liquors as they are being spread broadcast by a number of firms for advertising purposes. Physicians should avoid recommending the various wines, beers and whiskeys, and should forbid advertisers to add the sentence, "recommended by physicians," without an express permission has been granted for it. The Berlin central association for the campaign against alcohol announces in the month of April a scientific course for the study of alcoholism, together with an inspection of social hygienic institutions, under the direction of Professor Rubner.

Welcoming Congresses

I have previously referred to the unnecessary expense to which municipalities are put in entertaining congresses of various sorts. Happily the managing committee of the German Städtetag (a meeting of delegates from various cities) has formulated some principles that are intended to mitigate this nuisance. The omission of entertainments is recommended. A festal welcome should be given only to those associations that are invited by the cities and which can claim especial attention for themselves. The ceremonies of welcome should be restricted as much as possible. Of the same tenor is the edict of the imperial chancellor in which a restriction of participation by officials in the proceedings of scientific societies is directed.

Pharmacology

CERTAIN PRODUCTS OF THE ORGANIC CHEMICAL MANUFACTURING COMPANY

Report of the Council on Pharmacy and Chemistry

An investigation by Dr. Torald Sollmann appeared as a report of the Council in THE JOURNAL, Sept. 5, 1908, p. 818, under the title, "Formaldehyd Derivatives; Their Fate and Action in the Body, Together with Observations on Some Other Urinary, Intestinal and Wound Antiseptics." In this paper Dr. Sollmann showed that the claims made by the Organic Chemical Manufacturing Company for certain of its products were incorrect. The accuracy of Sollmann's findings was denied by the Organic Chemical Manufacturing Company, who issued a pamphlet in which appeared a report by Messrs. Sadtler & Sons, challenging Sollmann's results, and which pamphlet was endorsed by Dr. Henry Beates, Jr.

In accordance with its regular procedure, the Council appointed a referee with instructions to investigate the matter and report to the Council. The referee submitted to the Council letters from Messrs. Sadtler & Sons, Dr. Henry Beates, Jr., and Dr. Torald Sollmann, together with his own investigations and his report on them. The report of the referee follows: the report, together with the letters of Messrs. Sadtler & Sons, Dr. Henry Beates, Jr., and of Dr. Torald Sollmann in full are issued in pamphlet form.[1]

W. A. PUCKNER, Secretary.

REFEREE'S REPORT

The referee appointed to review the action of the Council on Pharmacy and Chemistry in refusing recognition to certain products of the Organic Chemical Manufacturing Company, submits the following report:

The action of the Council was based on Professor Sollmann's investigations of the products in question, the report of which was submitted to the Council and published in THE JOURNAL of the American Medical Association, Sept. 5, 1908.

In a printed pamphlet dated Sept. 15, 1908, the Organic Chemical Mfg. Co. claims to prove not only that Professor Sollmann's report is grossly erroneous and misleading, but that it is also unfair and dishonest. The last four pages of the pamphlet consist of a report from Samuel P. Sadtler & Son,[2] a Philadelphia firm of analytical and consulting chemists, in which Dr. Sollmann's most damaging statements concerning the so-called formasal products of the Organic Chemical Mfg. Co. are contradicted and severely criticized. As the report of this firm contains the only evidence brought out against the validity of Dr. Sollmann's conclusions concerning the products of that company, it is chiefly the substance of that report which now constitutes the points at issue.

The extravagant claims and the accusations and insinuations of the pamphlet itself to which is attached the name of S. Lewis Summers, the president of the concern, need not, engage the attention of the referee nor the attention of any member of the Council, including Dr. Sollmann, until it has been determined whether Dr. Sollmann's report to the Council or the report of Samuel P. Sadtler & Son to the Organic Chemical Mfg. Co. is in accordance with the facts.

Henry Beates, Jr., president of the Pennsylvania State Medical Examining Board, seems to have experienced no difficulty in reaching the conclusion that the attack of the Organic Chemical Mfg. Co. on the Council on Pharmacy and Chemistry, and especially on Dr. Sollmann, is abundantly justified by the facts. His endorsement of the report of Sadtler & Son is printed in heavy type on the first page of the pamphlet issued by the Organic Chemical Mfg. Co.

In reply to the referee's inquiry of Dr. Beates as to why and how he came to lend his name in support of the literature issued by that company, a long communication[3] was received setting forth the remarkable merits of the products manufactured by the Organic Chemical Mfg. Co. Dr. Beates further gives the personnel of what he calls a "committee" which he appointed, and together with whom he visited the establishment where the products are made.

[We learn that the gentlemen referred to by Dr. Beates as composing the "committee," state that it is a misunderstanding as to there having been a committee; that they merely made a visit to the plant by invitation, looked at it and went away; that while interested in what they saw they made no statement other than one of courteous interest.—ED.]

The substance of the conclusions, as stated by Dr. Beates, was that "the committee had every reason to feel convinced that true active chemical compounds were being manufactured."

So far as the Council on Pharmacy and Chemistry is concerned, it is manifestly unnecesary for the referee to make any comments on these conclusions. As this report may be published, however, the referee wishes to take this occasion to make a few elementary comments. The essential claim made for the products of the Organic Chemical Mfg. Co. is the same as that made for many other proprietary preparations, namely, that they are chemical compounds made by chemical combination of therapeutically valuable ingredients which are again set free and develop their valuable properties just where they can do the most good inside the human organism. Such plausible claims appeal of course to the laity and to physicians as well, and are extensively exploited by manufacturers of all kinds of worthless products as well as by manufacturers of products which may have some merit. Even physicians do not seem generally to know that because, say formaldehyd, or iodin, or salicylic acid, is used in the preparation of a compond it does not at all follow that such ingredients are easily obtainable from it. Because sugar contains the formaldehyd group and salt contains the element chlorin, it does not follow that sugar and salt will set free these active chemicals within the body. It is clear that all kinds of frauds can enter into such claims for the liberation of active ingredients. The ingredients may or may not be there; if there, they may or may not be there in chemical combination, and if there in chemical combination they may or may not be set free by any agency at the command of the animal body.

The conclusion of Dr. Beates' "committee" that they saw true chemical compounds being manufactured may be all right. There certainly is no reason for denying it, for no one, so far as the referee knows, has denied that at least some of the products of the Organic Chemical Mfg. Co. are more or less pure chemical compounds. It is manifest that Dr. Beates' private "committee" has contributed nothing that is of any use to the referee.

In other parts of his letter Dr. Beates offers sundry pieces of evidence showing that the "formasal products" break up within the human body. This evidence consists of statements which he has borrowed directly from the literature of the Organic Chemical Mfg. Co., or from the report of Sadtler & Son. His statements are therefore either worthless or superfluous, for the evidence submitted by Sadtler & Son does not improve on passing through the editorship of Dr. Beates or of Dr. Summers, and when writing that letter to the referee Dr. Beates knew that the evidence of Sadtler & Son was being investigated by the referee at the request of the Council on Pharmacy and Chemistry.

Finally, as to Dr. Beates' clinical results achieved by means of the formasal products: These may or may not be able to stand close investigation and repetition. Whether they do or not is not important at the present juncture. The chief basis on which the products of the Organic Chemical Mfg. Co. were refused recognition was that unwarranted—because unproved—statements were made concerning their "gradual cleavage in the human body" and repetitions of such claims by the president of the Pennsylvania State Board of Exami-

1. The complete pamphlet may be had on receipt of a stamped addressed envelope.

2. These four pages are reproduced in the complete pamphlet which may be had on receipt of a stamped addressed envelope.

3. Dr. Beates' letter appears in the complete pamphlet.

ners can not be accepted as a substitute for evidence as to the truth of such statements.

So far as the referee can judge from his letter, Dr. Beates has confused his hostility to various persons, including some members of the Council on Pharmacy and Chemistry, with his belief in the products of the Organic Chemical Mfg. Co. In no other way can the referee explain his dark hints as to politics, conspiracies, persecutions and bribery, or his unqualified approval of the slanderous pamphlet issued by the manufacturer of the "formasal" products, or his failure to recognize that loose and irrelevant suggestions of fraud could not do the "formasal" products any good in the eyes of any competent referee.

The "formasal" products were refused recognition by the Council because its first referee, Dr. Sollmann, found that the manufacturer had not proved the claim that these substances break up into their respective constituents within the human organism. Dr. Sollmann tried to verify the statements of the manufacturer, but obtained results which made it seem very clear that the manufacturer could not have even seriously attempted to prove that the formasal products yield appreciable quantities of formaldehyd or salicylic acid, or other active decomposition product within the body.

On receiving information of the action of the Council and a copy of Dr. Sollmann's report, the president of the Organic Chemical Mfg. Co. began, evidently, for the first time, to bestir himself in the direction of attempting to demonstrate the truth of his proclamations concerning the behavior of the formasal products within the human organism. To repeat his own words: "The report sent us as being that of Torald Sollmann is dishonest and within ninety days we shall prove its incorrectness beyond a question of a doubt." As a result of this remarkable decision, we have the report of Samuel P. Sadtler & Son to the Organic Chemical Mfg. Co. of Sept. 10, 1908.

According to this report Sadtler & Son seem indeed to have found no difficulty in proving the essential point which the manufacturer wanted them to prove and which he should have proved before submitting the formasal products to the Council on Pharmacy and Chemistry, namely, their decomposition into formaldehyd and salicylic acid within the human body. Sadtler & Son write: "Proving this dissociation we have found to furnish no difficulties other than is necessitated by a more detailed analysis of the urine of people taking these remedies in prescribed doses."

The detailed urine analyses to which Sadtler & Son refer are described as follows:

"Sample sent by Dr. ——— from patient (P. D.) taking 140 grains of ur-a-sol per day.

"Day's sample was 1,030 c.c. This was made slightly alkaline with sodium carbonate and extracted with ether to remove neutral substances. After making acid with hydrochloric acid.

"Ether extract, 0.5170 grams (7.50 grains).

"This sublimed in needle crystals, gave a strong $FeCl_3$ test and had the melting point of salicylic acid.

"The residue was then boiled with caustic soda solution and any possible basic principles extracted with ether and discarded. The residue was then made acid with hydrochloric acid and extracted again with ether.

"Second acid ether extract, 0.4664 grams (7.0 grains).

"This responded to the same test when the sublimed needles were taken."

It will be seen that Sadtler & Son have endeavored to distinguish between the undecomposed methylene-di-salicylic acid of the ur-a-sol and the free salicylic acid which should be present in the urine if the disalicylic acid is decomposed in passing through the organism. They purified the ether extract by subliming it and found that the product so obtained gave the ferric chlorid reaction as well as the melting point of salicylic acid.

These tests they fortified by showing that the solubility of salicylic and methylene-di-salicylic acid in benzol are very different and may be used as a means for distinguishing between the two.

If these tests of Sadtler & Son could be accepted as proving this crucial point, the decomposition of methylene-di-salicylic acid, there would be little need for further discussion. The referee would then move for a reconsideration of the Council's action on the formasal products. Unfortunately, the tests as described above by Sadtler & Son have no value and seem to represent only an extremely uncritical piece of commercial work. As this statement is a rather severe criticism of the work of Sadtler & Son, and since the essential point of the whole controversy is involved in it, it will be necessary to go into this matter in some detail. The referee will, however, be correspondingly brief when discussing the less consequential points raised by Sadtler & Son.

As evidence bearing on the subject, the referee has a communication from Sollmann[4] describing a repetition of the experiments described by Sadtler & Son. This communication from Sollmann the referee forwarded to Sadtler & Son in order to give them every opportunity to prove their point. Sadtler & Son availed themselves of this opportunity, and so far as Sollmann is concerned, they are therefore having the last word.

Sollmann's subject took in a day 10 gm. ur-a-sol, and he obtained from the corresponding acidified urine 0.47 gm. of ether extract. This residue gave the ferric chlorid reaction, but it showed neither the solubility nor the melting point of salicylic acid.

In these tests Sollmann omitted one point: he did not test the melting point of the sublimed urinary residue, as Sadtler & Son had done. Sollmann gives an excellent reason for not following Sadtler & Son in this respect. He found the pure methylene-di-salicylic acid breaks up and yields salicylic acid when heated until a sublimate is obtained.

In this manner Sollmann proves as definitely as any referee would be likely to require that the findings of Sadtler & Son, as described in their report to the Organic Chemical Mfg. Co., are "based on false premises."

It was a matter of considerable interest to the referee to see what Sadtler & Son could say to this damaging fact brought out by Sollmann.

In their communication[5] to the referee is found the following paragraph:

"Sollmann's criticism of the testing sublimates obtained by strong heating is quite just. We only did this once, and while the practice was indefensible on theoretical grounds we believe we only fell into it because an ether extract showed such a mass of low temperature sublimated needle-like crystals that it did not take a temperature that would break up methylene-di-salicylic acid. We certainly would not have tried such, as we have been familiar with this acid for five or six years, as we had tested this acid for Dr. Summers about that long ago."

Sadtler & Son is to be given credit for having thus frankly admitted a blunder of fundamental importance in the point at issue. In their remaining discussion on "the presence of salicylic acid in urine," Sadtler & Son "hedge" and explain and shift the ground with some dexterity, but they fail to "make good" on the essential point. Take this paragraph:

"We would not expect to have it so decomposed as to give a sublimate of salicylic, as we had devised a test for the analysis of acetyl-methylene-di-salicylic acid in which the salicylic acid is obtained by heating with fused caustic potash to 250 C., and we found that it had to be heated well up to that temperature to complete the elimination of the formaldehyd residue. This test we have reported to the Organic Chemical Co., but not as yet published. In this case it merely tends to show that methylene-di-salicylic acid does not break up with any great ease, when heated."

The stability of the salt of an acid in hot caustic potash has no particular bearing on the stability of the free acid. Sadtler & Son might as well have tried to prove that carbonic acid or chloric acid is stable because potassium carbonate and potassium chlorate can withstand considerable heat.

On another page we find the following paragraph which evidently is intended to prove that it is permissible to use the sublimates in determining whether the urine contains salicylic or methylene-di-salicylic acid:

"The four printed pages of our report appearing in Dr Summer's pamphlet did not contain all the points that we observed in making our tests. One of them is that in the test we here described and in several other analyses of urine from people taking Ur-a-sol we found to take place, what we have only noticed with very easily sublimable compounds such as salicylic and benzoic acids, namely that as ether was driven off from an extraction, the walls of the flask were covered with crystals. In one case we tested these crystals as to melting point and found them to be salicylic acid. We

4. Dr. Sollmann's communication appears in the complete pamphlet.

5. The communication from Sadtler & Son to the referee appears in the complete pamphlet.

know from having evaporated etherial solution of methylene-di-salicylic acid that it does not sublime at such low temperatures. We have also found that by heating both acids, viz., salicylic and methylene-di-salicylic, in flasks in an oil bath that salicylic acid sublimes very noticeably at considerably below 100 C., while methylene-di-salicylic acid did not sublime at all at temperatures to which we heated the bath, which happened to be 170 C."

Why Sadtler & Son should insist on using the subliming process in the treatment of their ether extracts after Sollmann has shown how elusive it proved in this case and in their own hands—that they have not attempted to explain. Sollmann has, of course, had no opportunity to reply to the statements contained in the above paragraph.

It may be added that the "experience" of Sadtler & Son as to sublimates deposited on the flasks when urinary ether extracts are evaporated does not agree with that of the referee, who has frequently seen such sublimates obtained from urines where there was no occasion to look for salicylic acid. As a matter of fact, the referee obtained it from his own urine after taking ur-a-sol just as he has often obtained it before when not taking ur-a-sol. Sadtler & Son, in the above paragraph, say that they once tested such a sublimate from a ur-a-sol urine as to its melting point and found it to be salicylic acid. But the melting point of such an unpurified sublimate has little if any value, and Sadtler & Son say nothing about the ferric chlorid reaction of those particular crystals. The referee did apply this reaction to his sublimate and was thus able to exclude salicylic acid. The reaction was entirely negative.

To quote again from Sadtler & Son's communication to the referee:

> "As to what Sollmann says of the quantitative separation of methylene-di-salicylic acid from salicylic: It will be noticed that Sollmann only speaks of extracting with ether in the way we spoke of on page 13. A very important part of what we did was briefly described, chiefly on page 14, as follows: 'The residue was then boiled with caustic soda solution and any possible basic principles extracted with ether and discarded. The residue was then made acid with hydrochloric acid and extracted again with ether.'
>
> "'Second acid ether extract, 0.4664 grams (7.0 grains).'
>
> "'This responded to the same test when the sublimed needles were taken.'
>
> "It was this second extraction, after we had gotten out all the acid principles the first time, that we obtained by boiling with alkali. We have not been able to ascertain just what the compound is which is soluble in water but insoluble in ether until boiled with caustic soda and then gives rise to salicylic acid (or if this is objected to, to bodies closely resembling salicylic acid). It is not methylene-di-salicylic acid, as that would have been easily extracted with ether. We believe it to be salicyl-uric acid for various reasons and, if it is, it demonstrates the work of the drug, as it is claimed to be a uric acid solvent. This, however, is not our concern, as in the present paper we are only desirous of substantiating our tests as reported to the Organic Chemical Co. The fact remains that each time we have carried out this test, we have apparently found more salicylic acid in this combination. Dr. Sollmann does not refer to this at all, and if he admitted it, we believe he would have to admit the action of the preparation, as the salicylic acid which is supposed to come from the methylene compound is supposed to be therapeutically active and just such a combination as we have found would be expected."

Here Sadtler & Son have a point against Sollmann. The latter did not go beyond the ether extraction in the acidified urine. On the other hand, there was no apparent reason why any such procedure should be adopted. And as is seen from the above paragraphs, Sadtler & Son do not now, on the basis of the last two extractions, claim the presence of free salicylic acid in the urine. They are now discussing some unknown "compound," which, on boiling with alkalies, gives rise "to bodies closely resembling salicylic acid." The unproved and improbable hypothesis as to "salicyl-uric acid" may furnish Sadtler & Son with an interesting topic for further investigation, but has nothing to do with the practical point at issue. The referee, passing judgment on the basis for the Council's decisions concerning the formasal products, could fairly have left out of consideration the new turn which Sadtler & Son introduce in the shape of this salicyl-uric acid compound. He decided, however, to determine for himself how much basis Sadtler & Son had for advancing such a hypothesis and he regrets to say that here again he failed to find any evidence worthy of serious consideration.

It is clear that in order to demonstrate the presence of any salicylic acid compound in the ur-a-sol urines which is soluble in ether only after being decomposed by boiling alkalies one must be sure that he has first extracted all the methylene-di-salicylic acid which the ur-a-sol urines admittedly do contain, before he boils the remainder with alkali. This Sadtler & Son did not do. They simply assumed that any methylene-di-salicylic acid present "would have been easily extracted with ether." This assumption is unwarranted. It is also inexcusable since by means of the ferric chlorid reaction one can determine with very little work when the ether extracts no longer take up any more substance giving the characteristic color reaction.[6]

Working with 200 c.c. of acidified ur-a-sol urine the referee found that it took seven extractions. Sadtler & Son worked with fully four times as large a volume and made no check as to when the extraction was finished.

The conclusion is clear. The new evidence introduced by Sadtler & Son is worthless. When acidified ur-a-sol urine is thoroughly extracted with ether subsequent boiling with alkali sets free no weighable salicylic acid. Sadtler & Son, it will be noted, obtained, almost half a gram. The referee obtained perhaps a few tenths of a milligram, i. e., barely enough for one rather faint color reaction. Incidentally it may be remarked that the uric acid fell out in perfectly typical fashion from the ur-a-sol urine after the addition of hydrochloric acid. The referee's ur-a-sol urine was obtained by taking 8.5 gm. of ur-a-sol in the course of about ten hours.[7] *The urine obtained in the course of twenty-four hours was very rich in methylene-di-salicylic acid or unchanged ur-a-sol but contained at most only traces of salicylic acid.* This essential point the referee has proved in the following manner:

Ur-a-sol is almost completely insoluble in dilute hydrochloric acid; salicylic acid is soluble. Consequently by merely adding enough hydrochloric acid to the urine to make a 1 per cent. solution the expected phenomenon happens, a precipitate comes down at once. This precipitate is very soluble in ether, is very little soluble in benzol and gives the ferric chlorid reaction.

The acidified urine was kept at 5 C. over night and filtered. To the filtrate was added sodic hydrate equivalent to the previously added hydrochloric acid. The filtered urine so obtained gave only an exceedingly faint reaction with ferric chlorid. To be specific it gave less of a color than the original urine diluted forty times. As the filtrate represented urine diluted with one volume of liquid this observation proves that less than one-twentieth of the substance giving the color reaction with ferric chlorid is left in the filtrate. It is certain, therefore, that less than 5 per cent. of the product in the urine could be salicylic acid. How much, if any, of this 5 per cent. actually is salicylic acid is of course immaterial.

In the light of this positive demonstration that the substance which gives the ferric chlorid reaction in ur-a-sol urines is not salicylic acid it is useless to make this report unnecessarily long by going into detailed refutals of the several smaller points raised in the report of Sadtler & Son. In Dr. Sollmann's report to the referee will be found adequate replies to every point.

The referee will, therefore, only very briefly touch on a few points. (1) As to the solubility of salicylic acid and methylene-di-salicylic acid in benzol. The fact that Sadtler obtained a positive color reaction with his "one minute" benzol extract of the urinary ether extract proves not that the substance consisted of salicylic acid, but that the reaction is also obtained with ur-a-sol. The referee obtained a positive reaction with ur-a-sol when he followed Sadtler's directions. The reaction is, however, much weaker with ur-a-sol or with the urinary

6. To test the ether solution it is only necessary to pour some of it in a test tube containing a little *very* dilute ferric chlorid solution and shake. The aqueous solution assumes a color proportionate to the amount of methylene-di-salicylic acid in the ether.

7. Having myself taken this quantity of ur-a-sol I feel justified in saying something concerning the taste of the stuff, although this is a point that hardly deserves the discussion it has received in the appended communications. The taste of a drug to a healthy person who takes it as an experiment is apt to be very different from the taste to a person who is sick and who believes or hopes that the drug will cure him. To me the stuff called ur-a-sol was very disagreeable, and I had the taste of it in my mouth the entire day. Only once did it have any nauseating effect. That again is, however, largely a matter of personal idiosyncrasy.

It will be noted that Prof. Sadtler now admits a more pronounced salicylic taste (p. 12). It is rather curious that he should have obtained this impression from less than a gram, but not from a "pinch" of the product which has such a slight solubility as ur-a-sol.

extracts than with salicylic acid. Incidentally, it may be said that Sadtler's procedure is more complicated than is necessary and correspondingly less reliable. The use of alcohol can advantageously be omitted. If ur-a-sol be shaken one minute with benzol and a little of the filtered benzol is poured directly into a very dilute ferric chlorid solution and shaken a very decided color reaction is obtained in the aqueous solution. Why diminish the reaction by the addition of alcohol?

(2) The Organic Chemical Mfg. Co. has made all the capital it could out of Professor Sadtler's accusation that Dr. Sollmann had erroneously quoted Fränkel as to the behavior of methylene-di-salicylic acid in the human organism. Fränkel has settled this point in favor of Sollmann.

(3) The question as to formaldehyd liberation when the formasal products are treated with various reagents (water, acids and alkali) has lost its significance since we now know that no salicylic acid is split off when the products pass through the human organism. To quote from the original report of Sadtler & Son "If salicylic acid is found so abundantly in the urine when acetyl-methylene-di-salicylic acid (ur-a-sol) is taken, it is evident that a corresponding amount of formaldehyd was liberated." That no formaldehyd is liberated is now equally evident from the demonstrated absence of salicylic acid from the urine.

The referee has gone over the tests made by Sollmann and by Sadtler & Son (except the phenyl hydrazin test which it seemed not worth while to take up) as to the liberation of formaldehyd by ur-a-sol, sodiformasal, iodomuth and guaialin. In view of the sensitiveness of these color tests it is entirely losing sight of the essential point at issue to dispute as to which test is more sensitive or more reliable. If formaldehyd were split off there would be no trouble about getting abundant tests and all results short of most decided positive ones are really negative in so far as any practical point of view is concerned. As a matter of fact, however, none of the products split off any formaldehyd when treated with water, hot or cold, or with dilute acid or alkali. Sollmann's original report is therfore correct and the findings of Sadtler & Son are erroneous.

Sollmann's later tests as reported to the refree give traces or "fair traces" by the Jorissen test when by Sollmann's original test they were entirely negative and by Sadtler's tests distinctly positive. Sollmann's faint reactions as reported to me are due, in the opinion of the referee, to the fact that he reversed the order of adding his reagents. What Sadtler's "distinct" or "strong" tests are due to, the referee does not know. When properly made the Jorissen test gives entirely negative results.

As to the tests used by Sadtler & Son and involving the use of concentrated sulphuric acid the referee entirely agrees with Sollmann who says that such tests are not adapted to prove the formation of formaldehyd under the influence of water or very dilute acids and alkalies. Sadtler's reply to this criticism of Sollmann is rather disingenuous: "How Dr. Sollmann can read into my description of my tests the idea that any of the substances in solid form were put into strong sulphuric acid I do not see, and yet that is what he is apparently talking about."

No, that is not what Sollmann is talking about. Placing "the substance to be investigated in contact with concentrated sulphuric acid" does not imply that the substance must be added in solid form. It also covers the conditions of Sadtler's experiments of adding the solution of a substance to be investigated in contact with concentrated sulphuric acid.

(4) For the sake of completeness the referee ought perhaps to explain the findings of Dr. Latham Clarke, whose report the Organic Chemical Mfg. Co. has quoted so ostentatiously in behalf of their contention that the taking of ur-a-sol gives rise to salicylic acid in the urine. Dr. Clarke was engaged by that company for the purpose of working out a practical method of manufacture of a certain product. On the last day of his engagement in the shop of that company Dr. Clarke was asked to test a "ur-a-sol" urine for salicylic acid. He did so and obtained positive results. The method consisted of passing compressed steam over the dried urine residue and testing the solution so obtained by means of ferric chlorid. No attempt was made to determine whether methylene-di-salicylic acid would not also go over with steam. *The test was therefore, of course, not conclusive and Dr. Clarke authorizes the referee to say that he is no longer willing to stand for the validity of the test and further that he very much regrets that his name was ever connected with it.*

(5) As to the antiseptic properties of ur-a-sol, Sadtler & Son sent the referee a small sample of ur-a-sol urine which gave a fair ferric chlorid reaction. Twelve hours after this urine was received it began to grow cloudy and in the course of two or three days a considerable deposit had formed. The usual decomposition resulting in the formation of ammonium carbonate and a characteristic odor did not set in. The referee's own ur-a-sol urine behaved in the same manner, while a sample to which he added a little chloroform remained clear. Essentially similar results were obtained by adding ur-a-sol directly to a fresh sample of urine.

(6) Finally it should be said that the letter to the Organic Chemical Mfg. Co. from the secretary of the Council on Pharmacy and Chemistry with regard to the rejection of its products might have been more full in which case it undoubtedly would also have been more accurate. The brevity and the inaccuracy of the letter was, however, more than compensated for by the fact that the company also received the full report of the referee. The pamphlet published by the company indicates that the author of it understood very well the import of the details contained in Sollmann's report, yet chose for advertising purposes to confuse the contents of a mere routine letter with the well considered statements of the referee, Dr. Sollmann.

The referee does not recommend reconsideration of the Council's action on the products of the Organic Chemical Mfg. Co.

Correspondence

Serum Sickness

To the Editor:—The increasing interest in serum poisoning, as shown by the recent report of cases, leads me to relate the following personal experience. I am furthermore induced to do so by the possibility herein shown of the sensitive condition far exceeding the usual time limits.

In 1902, I attended a case of diphtheria. I took an immunizing injection of antitoxin of 1,000 units. No inconvenience or rash followed. A few months later my duties brought me into close relation with bubonic plague and I was injected with Haffkine's prophylactic. This is a vaccine. A very severe reaction followed, temperature rose to 102 F., there was much urticaria and general malaise for two days. I looked on this as a toxic and not a serum reaction. In January of this year I was in very close relation to an unusually severe case of diphtheria, in which I administered 108,000 units of antitoxin to the patient, a child of 7. The latter recovered, slight multiple neuritis followed, but no serum symptoms. The hospital interne and myself were both much exposed to infection, and we thought it advisable to take an injection of 1,000 units each. In the case of the interne no results followed. I remained quite well for seven days, when suddenly much painless swelling, in and around the parotid, appeared. This subsided by the next day, to be followed by the sudden appearance of urticaria, distributed much as in herpes zoster, over the course of an intercostal nerve corresponding to the point of injection of the serum. It subsided in the course of a few hours, to be followed at 10 p. m. by an urticarial eruption over every part of the body. The irritation was unbearable as the night advanced, the temperature rose to 102.5 F. The pulse was 160. Vertigo and partial syncope followed any attempt to rise. I think this may be accounted for by the great engorgement of the skin depleting vessels and brain. Toward morning, much relief was obtained by bathing the surface with ammonia and water (about 1-10). The next day was passed in bed in a state of prostration. There was some recrudescence of the urticaria in the evening, promptly allayed by the ammonia. Good sleep followed, and

the next day I was well except for some pains in the joints, which persisted for nearly a week.

Now the main interest of the case lies in the fact that in 1902 I was not susceptible to the toxic action of the serum; in 1909 I was intensely so. The serum of the latter date was not toxic in itself, as shown by its lack of action in the case of both patient and interne—ergo it would seem as though I had been activated by the first dose and remained so after a period of seven years.

We clearly need the aid of a careful investigation into the question of time limit. It may well be that my experience was not so exceptional as it appears.

H. D'ARCY POWER, M.D., San Francisco.

Delegates for Pharmacopeia Convention

To the Editor:—In accordance with the provisions of Article VIII, Chapter 1, of the by-laws of the U. S. Pharmacopeial Convention, the president of the convention hereby invites the several bodies, entitled under the constitution to representation therein, to appoint delegates to the first decennial meeting of the said convention to be held in the City of Washington, May 10, 1910.

The attention of all concerned is invited to the following extract from the constitution from Article II on membership:

SECTION 1. The members of the United States Pharmacopeial Convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: incorporated medical colleges and medical schools connected with incorporated colleges and universities; incorporated colleges of pharmacy, and pharmaceutical schools connected with incorporated universities; incorporated state medical associations; incorporated state pharmaceutical associations; the American Medical Association, the American Pharmaceutical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation.

SECTION 2. Delegates appointed by the Surgeon-General of the United States Army, the Surgeon-General of the United States Navy, and the Surgeon-General of the United States Marine-Hospital Service, and by the organizations not hereinbefore named which were admitted to representation in the convention of 1900, shall also be members of the corporation. Each body and each branch of the United States Government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted on as provided for by the by-laws. Delegates admitted as members at any decennial meeting shall continue to be members of the United States Pharmacopeial Convention until their successors shall have been appointed and admitted as delegates to the ensuing convention, and no longer.

Notification of the appointment of delegates, accompanied by the necessary certification of eligibility as required by Article II, Section 1, of the constitution above quoted, should be forwarded as soon as practicable to the secretary of the Board of Trustees.

HORATIO C. WOOD, M.D., Philadelphia, President.
MURRAY GALT MOTTER, M.D., Secretary of the Board of Trustees, 1841 Summit Place, Washington, D. C.

Miscellany

Care of Weak Infants and Children.—That something more than temporary relief or routine institutional care is necessary to improve the defective vitality of the sick and ailing infants of the poor and combat the influence of their wretched environment is quite evident from the indifferent results obtained from ordinary methods. Dr. Henry Dwight Chapin (*Charities and The Commons*, March 27, 1909) describes the methods adopted by the Speedwell Society in caring for this class of children. The plan followed is the boarding-out system, and the results have been remarkably good considering that bottle-feeding has been employed exclusively. The children have been placed in carefully selected homes in a healthful location. A physician and a trained nurse have oversight of the cases. The foster-mother is instructed in the feeding and care of the baby and receives $12 a month as compensation. Many take a great interest in the work and are very successful in nursing feeble infants back to health. Some tire of the work and others are dropped because of inefficiency, but the aim is to retain the same families in the work so far as practicable. Dr. Chapin says: "The boarding-out method, under careful supervision in the country, is the best plan yet devised to relieve and save these infants. The first series of 121 cases would nearly all have died under ordinary methods of handling and yet nearly two-thirds of them were saved. They were poorly nourished, from bad hygienic surroundings, with various degrees of digestive disturbances from faulty feeding on the bottle, and stationary or losing weight. A large proportion were restored to fair and even vigorous vitality, although kept on the bottle. The greater number of those from three to six months to one year was saved, in the first series nearly three-quarters being the proportion. These are brilliant results considering that artificial feeding and was still of necessity exclusively employed."

Medical Statistics for European Russia in 1906.—The *St. Petersburg. med. Wochenschrift*, March 27, published the vital statistics and public health reports just issued for 1906. The total mortality is stated to have been 29.2 per thousand inhabitants, the births 45.9 per thousand. There were 17,096 civilian physicians, 21,670 "feldshers," 11,032 midwives, 4,917 dentists, and 8,828 pharmacists, to a population of 106,114,589. The number of sick treated in hospitals during the year was 2,458,207, with a mortality of 5.2 per cent. There were 133 asylums for the insane, with 30,671 beds and 566 maternities or obstetric wards with 4,755 beds, and a record of 178,877 deliveries, with a mortality of 0.5 per cent. There are 20 Pasteur institutes, and 19,668 persons were given Pasteur treatment during the year, of whom 106 died. There were 178 medical societies and 44 hygienic laboratories. The total outlay for medical purposes was $38,760,000 (76,000,000 rubles). Of this 7 per cent. was borne by the central and 50 per cent. by the provincial treasuries, 24 per cent. by the cities and 17 per cent. by private individuals and societies.

Appendicitis in Childhood.—In *Hygica Festband*, Carlson discusses acute appendicitis during the first fifteen years of life on the basis of 47 original cases. He believes that appendicitis is more serious in children than in adults, because it more often passes over into diffuse peritonitis, because changes in the appendix more often are gangrenous and because the septic form is relatively common. The death rate in his cases has been much greater than in the case of adults, the probable reason being that the children have been seen too late for operation. Every child diagnosed to have appendicitis during the first 24 hours of sickness should be operated on before the end of that time. Operation is also indicated during the second 24 hours. During the third, fourth and fifth days operation should be made in every case that does not show definite and persistent signs of improvement; but it is to be remembered that during this later period the operation is technically much more difficult. After the first attack operation should be made in the free interval. The points on which Carlson lays special emphasis are the great danger of appendicitis in children and the necessity of early and correct diagnosis—not an easy task—so that operation may be done as early as possible during the first attack.

Experimental Researches on Some Ferments of the Bile.—G. Bonanno (*Arch. di farm. sper. e sc. aff.*, vii, 466) finds that the bile of the human being, of pigs, dogs, sheep and calves always possesses amylolytic and lipolytic properties, but no proteolytic action. The amylolytic action is stronger in the bile of herbivora than omnivora, while the lipolytic is about the same for all. Bile from either animal after the addition of pieces of duodenal mucosa shows no proteolytic action.

The amylolytic and lipolytic actions of bile are rapid. Heating to boiling destroys and filtering through a Chamberland filter weakens both the amylolytic and lipolytic actions. Bile collected from a permanent, complete fistula in a dog showed no change during hunger nor with variations in diet. The strength of the amylolytic and lipolytic ferments of the bile are about the same as those of the other body fluids, such as the blood, urine and amniotic fluid. Bonanno concludes that the bile is not to be considered as a digestive secretion in itself. Its function is to reinforce the enzymic digestive action of the pancreatic juice, as was advocated by Bruno.

Fatal Intoxication from Helminths.—The *Revista de Med. y Cirugia*, January 10, contains a report by J. T. Arteaga of Havana of a case which at first suggested yellow fever. The patient was a girl of 13; she succumbed in semicoma just as the microscope had revealed innumerable eggs of the ascaris in the diarrheic stool. The diagnosis had previously wavered between yellow fever, hemorrhagic smallpox, pernicious jaundice or poisoning with potassium chlorate. Arteaga states that he has never encountered such severe hemolysis even in ankylostomiasis as in this case of fatal helminthiasis.

Association News

New Railroad Rates Granted

The Committee on Transportation announces that it has secured a special rate of $26.00 from Chicago to Atlantic City and return. These are tourist tickets, on sale beginning June 1, with a thirty day limit, and are sold from the "gateways," as they are called. From other points east and also from western points to these gateways, the previously announced rate of a fare and a half will probably be adhered to. A more explicit announcement will be given next week. Details may also be obtained from the railroads.

The Pennsylvania Lines announce that if tickets are purchased reading via Washington, stop-over of ten days will be allowed on both going and return trip, at Washington, Baltimore, and Philadelphia, provided the tickets so read and are deposited with the agents at those points immediately on arrival.

The Pennsylvania Lines will run the American Medical Special, Chicago to Atlantic City, leaving Chicago at 3 p. m., Sunday, June 6, and arriving at Atlantic City early the next afternoon. The Chicago and Alton Railroad will run a special train from Kansas City and St. Louis to Chicago to connect with it.

NEW MEMBERS

List of new members of the American Medical Association for the month of April, 1909:

ALABAMA

Fielder, J. W., Benton.
Greenwood, H. A., Greeley.

ARIZONA

Palmer, E. P., Phoenix.
Pearson, J. M., Camp Verde.

ARKANSAS

Chesnutt, J. H., Hot Springs.
Reamy, Sandford, Hot Springs.
Strachan, J. B., Hot Springs.

CALIFORNIA

Friedberger, William, Stockton.
Hawkins, G. G., Middletown.
Hutchinson, Randall, Los Angeles.
Lafontaine, Emma, C., San Francisco.
Lund, G. J., Los Angeles.
Mallory, G. W., Santa Rosa.
Reinstein, A. H., Veterans Home.
Seabolt, Gertrude C., Los Angeles.
Shortlidge, E. D., San Francisco.
Weyer, G. A., San Francisco.
Worthington, Lois, Bakersfield.

COLORADO

Beers, Ida V., Denver.
Hereford, J. H., Cripple Creek.

CONNECTICUT

Harrison, J. F., Stamford.
Maloney, M. W., New Britain.
Lewis, G. F., Stratford.

DELAWARE

Chipman, I. L., Wilmington.
Kraemer, W. H., Wilmington.

DIST. OF COLUMBIA

Butz, A. D., Washington.
Tobin, R. F., Washington.

FLORIDA

Blackshear, E., High Springs.
Ross, W. E., Jacksonville.

GEORGIA

Donaldson, H. R., Atlanta.
Kendrick, W. S., Atlanta.

IDAHO

Callaway, Mary A., Boise.
Lyle, J. M., Peck.
Shepard, J. H., Coeur d'Alene.

ILLINOIS

Aird, A. J., Carterville.
Atherton, C. C., Peoria.
Betts, A. J. Mace, Chicago.
Blankmeyer, H. C., Springfield.
Goodell, F. W., Effingham.
Gould, C. W., Fairdale.
Holland, O. D., Streator.
Hockman, B. F., Sumner.
Holm, Henry, Waukegan.
Huestis, Arthur, Chicago.
Kalowsky, M. J., Waukegan.
Loomis, R. R., Burnside.
Lackner, E., Chicago.
McQuaide, T. L., Pittwood.
Mullen, M. C., Chicago.
Myers, W. F., Coal Valley.
Newman, F. L., Chicago.
Poole, G. W., Danville.
Uehren, W. A., Aurora.
Urban, R. O., Evansville.
Winbigler, E. S., Alexis.
Winsor, R. F., Peoria.

INDIANA

Burkhardt, A. E., Tipton.
Busjahn, F. A., Logansport.
Green, J. W., Albion.
Lisman, W. A., Carlisle.
Luckett, E. R., Marengo.
Peare, R. C., Bellmore.
Redden, T. O., Jolietville.
Reed, L. D., Hope.
Scudder, J. A., Edwardsport.
Sherrer, H. E., Hammond.
Terflinger, F. W., Logansport.

IOWA

Alcorn, W. L., Gibson.
Barber, O. S., Kent.
Battin, J. F., New Providence.
Carpenter, W. E., Tama.
Cleaves, P. B., Cherokee.
Dean, W. W., Sioux City.
Farnham, A. J., Reinbeck.
Gethman, C. C., Eldora.
Hickman, S. R., Eddyville.
Howell, E. B., Tiffin.
Hoyt, L. F., Jefferson.
Lamb, Leslie, Hedrick.
Lambert, E. J., Ottumwa.
Lewis, W. H., Alden.
Linquist, A. L., Stanton.
Loiseaux, T. E., Dubuque.
Lymington, T. J., Ackley.
McEvilly, W. J., Dysart.
Meyers, F. W., Dubuque.
Morton, W. M., Iowa Falls.
Mueller, J. G., Iowa City.
Noble, N. S., Des Moines.
Quire, F. E., Taintor.
Shine, M. L., Winthrop.
Snyder, C. A., Dubuque.
Tait, A. M., Blakesburg.
Thomson, T. L., Toledo.
Wellenweber, E. G., Keokuk.

KANSAS

Anderson, A. G., Wichita.
Dillingham, W. R., Morland.
Graves, H. W., Gypsum City.
Kirby, J. C., Cedar Vale.
Townsdin, A. M., Barnard.
Tretbar, F. W., Hudson.
Woodin, J. G., Iola.
Wiley, F. M., Fredonia.
Yereman, O. H., Kansas City.

KENTUCKY

Anderson, J. L., Manchester.
Brand, L., Maysville.
Clark, G. F., Winchester.
Craddock, J. W., Bonnieville.
English, C. C., Louisville.
Fugate, I. T., Middlesboro.
Gambille, J. C., Paintsville.
Hoover, J. C., Owensboro.
Hord, W. H., Maysville.
Hornsby, H. C., Burning Spgs.
Horton, W. A., Grayson.
Humphrey, B. F., Sturgis.
Hunt, J. D., Lexington.
Kendall, J. L., Louisville.
Knox, J. F., Bowen.
Manning, I. S., Manchester.
McKee, E. M., Lexington.
Nunn, W. H., Henshaw.
O'Roark, G. B., Grayson.
Phelps, R. M., Versailles.
Proctor, W. A., Auburn.
Ricketts, C. T., Bright Shade.
Smith, L. O., Williamsburg.
Stovall, J. O., Grayson.
Taylor, T. J., Richmond.
Webb, G. P., Burning Spgs.
Wood, R. W., Danville.
Wynns, J. G., Sturgis.

LOUISIANA

Sims, E. K., Donaldsonville.

MAINE

Austin, L. K., Waterville.

MARYLAND

Bay, R. P., Baltimore.
Carmine, W. M., Ridgely.
Deming, H. V., Cumberland.
Keller, L. H., Hagerstown.
Macgill, J. C., Catonsville.
McLane, W. O., Frostburg.
Ross, J. A., Trappe.
Smart, L. G., Lutherville.
White, E. W., Poolesville.

MASSACHUSETTS

Cleaves, H. T., Harding.
Cutter, Ephraim, West Falmouth.
Dwight, E. W., Boston.
Farr, I. H., Holyoke.
Frame, Joseph, Rockland.
Giguere, A. J., North Adams.
Hamilton, A. J. A., South Boston.
Holden, C. S., Attleboro.
Keenan, H. J., South Boston.
Le Gro, L. B., Haverhill.
MacCallum, W. P., Boston.
Mixter, C. G., Boston.
Paine, N. E., West Newton.
Raymond, K. P., Wellesley.
Richardson, C. A. C., Somerville.
Richardson, E. P., Boston.
Smalley, F. L., Reading.
Stevens, H. P., Cambridge.
Ward, E. S., N. Attleboro.
White, Levi, Worcester.
Whitney, E. M., New Bedford.

MICHIGAN

Fuerbringer, G. H., Saginaw.
Hewkey, J. W., Alanson.
Howell, A. J., Deford.
Lang, F. W., Marine City.
Long, C. E., Elk Rapids.
McLean, C. H., Caro.
McRae, D. H., Beal City.
Pease, J. F., Big Rapids.
Probert, C. C., Roscommon.
Rand, W. H., Charlotte.
Staley, W. A., Fairgrove.
Stickley, A. E., Mesick.
Willoughby, L. L., Mancelona.
Woodbury, W. E., Ionia.

MINNESOTA

Allen, H. W., Minneapolis.
Altnow, H. O., Brainerd.
Benepe, L. M., St. Paul.
Brede, W. G., Minneapolis.
Daugherty, L. E., Eveleth.
Franchina, F., St. Paul.
Hagen, O. J., Moorhead.
Hand, W. R., Wendell.
Holcomb, O. W., St. Paul.
Mellenthin, M. A., Janesville.
O'Hair, Patrick, Waverly.
Rexford, L. A., Minneapolis.
Roan, C. M. J., Minneapolis.
Rome, R. R., Minneapolis.

MISSISSIPPI

Anderson, H. M., Tupelo.
Bell, C. G., Canton.
Darden, G. T., Blanton.
Givhan, J. E., Pontotoc
Marshall, C. J., Lambert.
McKinley, W. R., Columbus.
Orendorf, B. T., Rolling Fork.
Perkins, F. P., Batesville.
Tucker, C. H., Philipp.

MISSOURI

Austin, C. S., Carrollton.
Bond, H. W., St. Louis.
Brewster, R. B., Kansas City.
Crawford, R. O., Eldorado Spgs.
Crump, Archileus, Batesville.
Dailey, F. B., Keota.
De Long, S. W., Blythedale.
Erdhaur, H. B., St. Louis.
Gallagher, J. C., Valley Park.
Griffin, Fred, Mexico.
Harris, J. A., Mt. Vernon.
Harrison, Wm., Marshall.
Hatton, O. F., Sedalia.
Heuske, A. C., St. Louis.
Hull, A. G., Kansas City.
Humphreys, T. H., Kissee Mills.
Humphrey, J. H., St. Louis.
Lapp, J. G., Kansas City.
Long, J. M., St. Louis.
Love, W. S., Bertrand.
Lyttle, J. A., Goodson.
Martin, S. P., East Prairie.
Mayfield, L. S., Illmo.
McCoy, W. B., Bronaugh.
McCully, James, Dixon.
Nixon, J. H., Springfield.
O'Brien, L. F., Webster Groves.
Prentice, H. S., Pleasant Hill.
Ragsdale, T. J., Lees Summit.
Remme, C. T., St. Louis.
Rice, J. M., Columbus.
Royster, G. D., St. Louis.
Sandperl, Harry, St. Louis.
Scott, E. A., St. Louis.
Seba, J. D., Bland.
Spitze, E. C., St. Louis.
Staats, V. C., St. Louis.
Standard, D. E., Springfield.
Strode, R. C., Mexico.
Taylor, H. I., New Bloomfield.
Vandeventer, D. O., Garrison.
Willis, J. B., Farley.
Witter, W. L. M., Milan.
Woods, R. J., Smithville.

MONTANA

Attix, F. F., Lewistown.
Jordan, Arthur, Twin Bridges.

Lanphier, V. A., Butte.
Rightenour, G. W., Sheridan.
Rundquist, E. M., Missoula.
Shea, W. E., Missoula.
Smetter, M. C., Butte.
Smith, H. F., Pony.

NEBRASKA

Greenman, J. W., Hastings.
McCabe, F. H., Arapahoe.
Moore, M. S., Gothenburg.
Pheasant, L. R., Pierce.
Pheland, L., Grand Island.
Robinson, Amy, Hastings.
Simanek, G. F., Omaha.
Taylor, J. S., Steele City.
Wengert, H. C., Overton.
Wiederanders, E. F., Eustis.
Willis, J. M., Marsland.
Woodard, J. M., Aurora.

NEVADA

Krebs, E. T., Carson City.
Maclean, Donald, Reno.

NEW HAMPSHIRE

Bailey, G. S., Hillsboro.
Barker, R. H., Chester.
Beattie, W. J., Littleton.
Davis, W. S., Sanbornville.
Stearns, H. C., Concord.

NEW JERSEY

Baldwin, W. E., Newark.
Bowman, J. F., Irvington.
Boysen, P., Riverton.
De Grofft, E. E., Woodstown.
Finke, G. W., Hackensack.
Kain, W. W., Camden.
Kaufnold, Frank, Newark.
Kelm, W. F., Newark.
Marcus, M. D., Atlantic City.
Meinzer, M. S., Perth Amboy.
Underwood, J. H., Woodbury.
Wainwright, J. M. B., Jersey City.

NEW MEXICO

Amble, C. J., Manzano.
Burton, S. L., Albuquerque.
McCreary, Marcellus, Magdalena.
Ottoson, C. D., Willard.
Russell, J. G., Tucumcari.
Sellers, H. W., Knowles.
Triplett, T. A., Koehler.

NEW YORK

Burke, Joseph, Buffalo.
Clark, T. E., Brooklyn.
Corwin, A. S., Rye.
Cutler, C. W., New York City.
Duchscherer, C. C., Buffalo.
Frankel, Meyer, New York City.
Grant, J. P., New York City.
Grushlau, Israel, New York City.
Guenther, T. C., Brooklyn.
Johnston, J. C., New York City.
Kindred, J. J., New York City.
King, L. W., Lowville.
Lyons, J. J., Brooklyn.
Macpherson, Duncan, New York City.
Macumber, J. L., Brooklyn.
Matheson, A. R., Brooklyn.
McCombs, G. M., Hempstead.
Nelson, J. R., Kingston.
Preston, A. W., Middletown.
Radin, M. L., New York City.
Rex, W. F., Brooklyn.
Riedel, A. H., New York City.
Rushman, J. C., Brooklyn.
Schirck, F. F., Nimeola.
Shaut, F. C., Addison.
Smart, I. T., New York City.
Tanner, E. K., Brooklyn.
Whitbeck, B. H., New York City.
White, Davenport, New York City.

NORTH CAROLINA

Boone, W. H., Morrisville.
Brown, Zeno, Greenville.
Faison, I. W., Charlotte.
Lawrence, C. S., Mt. Airy.
Salley, E. M., Saluda.
Schonwald, J. T., Wilmington.
Summers, C. L., Winston-Salem.

NORTH DAKOTA

Hagan, E. J., Williston.
Heimark, A. J., Finley.
McCannel, A. D., Minot.
McLean, Neil, Kenmare.
Moeller, T. O. E., Minot.

OHIO

Berry, J. C., Alledonia.
Bookwalter, W. S., Miamisburg.
Brodberger, W. L., Cincinnati.
Brush, E. C., Zanesville.
Burgess, N. A., Rock Creek.
Foertmeyer, A. W., Cincinnati.
Gantt, S. O., Centerburg.
Hawley, E. N., Norwalk.
Heyn, D. S., Cincinnati.
Hill, E. W., Cleveland.
Jolley, J. W., Morral.
Junkerman, G. S., Cincinnati.
Kennedy, S. V., Washingtonville.
King, Clarence, Cincinnati.
Kunz, Frank E., Greenville.
Lapsley, Inez, Cincinnati.
Lemley, E. P., Vaughnsville.
McCreight, G. C., New Concord.
McGavren, G. W., Van Wert.
Metzger, Jeremiah, Toledo.
Monaghan, E. P., Cleveland.
Nelles, A. B., Columbus.
Pfeiffer, Arthur, Cincinnati.
Ramsey, W. C., Hopedale.
Schutzbach, J. C., Strasburg.
Stoeltzing, C. A., Cleveland.
Thompson, C. A., Raymond.
Thompson, F. E., Geneva.
Tweedie, A. M., Cleveland.
Weiser, W. J., Marion.
Wills, L. E., Omega.
Yoder, H. M., Smithville.

OKLAHOMA

Bailey, F. M., Carnegie.
Bomborger, C. C., Paden.
Chumbley, C. A., Rocky.
Dunn, R., Davis.
Feild, Julian, Enid.
Gill, W. W., Gracemont.
Haas, Karl, Harrah.
Jackson, T. J., Marsden.
Johnson, G. L., Byars.
Lancaster, L. T., Avard.
McQuaid, J. M., Cloud Chief.
Moore, L. F., Jackson.
Moss, B. H., Willow.
Mullins, G. C., Kiowa.
Neighbors, G. C., Broken Arrow.
Penney, T. A., Tulsa.
Riggan, C. E., Monroe.
Scarborough, J. W., Russell.
Shinn, T. J., Wagoner.
Shull, R. J., Hugo.
Stiles, G. S., Morse.
Tedrowe, C. W., Elk City.
Walker, J. A., Fleetwood.
Weiser, D. D., Alden.
Weller, R. E., Pawnee.
Westermeier, G. W., Anadarko.

OREGON

Babbitt, O. M., Portland.
Beaumont, J. F., Portland.
Brooke, F. W., Portland.
Ellis, R. H., Portland.
Fessler, Theo., Portland.
Koehler, G. F., Portland.
Saylor, A. L., Sherwood.

PENNSYLVANIA

Anders, W. Z., Trappe.
Beattie, John, Lebanon.
Bell, D. M., Claysville.
Berge, W. H., Avoca.
Berryhill, W. G., South Sharon.
Boale, J. A., Vandergrift Heights.
Brallier, S. A. E., Conemaugh.
Brecker, N. F., Philadelphia.
Bunce, W. M., Philadelphia.
Currie, C. A., Philadelphia.
Dibert, C. C., Buffalo Mills.
Dintenfass, Henry, Philadelphia.
Dolson, F. E., Philadelphia.
Dunmore, C. A., Philadelphia.
Field, B. R., Easton.
Fisher, J. V., Philadelphia.
Fox, G. T., Bath.
Greenewalt, F. L., Philadelphia.
Hanna, G. C., Philadelphia.
Koons, P. R., Mechanicsburg.
Lichtenwalner, Sarah M., Philadelphia.
McAvoy, J. F., Catasauqua.
Neel, H. A. P., Philadelphia.
Norris, E. P., New Castle.
Powell, W. E., Philadelphia.
Price, C. E., Philadelphia.
Price, H. T., Pittsburg.
Raby, M. R., Philadelphia.
Reinoehl, D. V., Erie.
Ritter, F. W., Tannersville.
Roberts, M. A., Philadelphia.
Spatz, G. E., Hampton.
Swindells, W. C., Philadelphia.
Waage, F. O., Philadelphia.
Wesver, H. F., Easton.
Weaver, J. M., Allentown.
Weddell, E. P., Scottdale.
Wesley, W. H., Pittsburg.
Wright, G. J., Pittsburg.
Yaeger, C. G., Philadelphia.

RHODE ISLAND

Flynn, H. S., Providence.
Garvin, L. F. C., Providence.
Hopkins, H. W., Warren.
Payne, F. I., Westerly.

SOUTH CAROLINA

Alston, Rowland, Charleston.
Fennell, W. W., Rockhill.
Nardin, W. H., Anderson.
Orr, J. L., Greenville.
Owens, L. B., Columbia.
Smith, R. D., Greenville.
Young, J. L., Clinton.

SOUTH DAKOTA

Holmes, C. F., Hecla.
Homan, C. A., Emery.
Miller, J. L., Kennebec.
Minty, F. W., Rapid City.
Schroyer, C. T., Chester.

TENNESSEE

Anderson, W. S., Memphis.
Blanton, M. A., Union City.
Boyatt, F. M., Oneida.
Brew, James, Jr., Nashville.
Clifton, Joe, Hickory Valley.
Delaney, J. A., Bristol.
Geisler, F. O., Isabella.
Jones, T. ap R., Knoxville.
Morrison, J. C., Clarksville.
Paschall, G. C., Arrington.
Pickens, D. R., Nashville.
Quinn, E. A., Cleveland.
Sells, G. J., Johnson City.
Smith, T. L., Morristown.
Stevens, J. W., Nashville.
Walden, V. A., Fountain Head.
Watkins, E. D., Memphis.
West, E. T., Johnson City.

TEXAS

Braden, C. F., El Paso.
Nash, A. W., Dallas.
Robinson, G. J., Houston Heights.
Warren, W. O., Pecan Gap.
Wilhite, J. T., Austin.

UTAH

Bridge, T. B., Logan City.
Cannon, W. T., Salt Lake City.
Gose, I. T., Eureka.
Snow, Clarence, Salt Lake City.

VERMONT

Duffy, P. S., Barre.
Greene, H. P., Brattleboro.
McGinity, J. T., Ludlow.

VIRGINIA

Brown, Benj., Nokesville.
Curtis, H. W., Denbigh.
Gill, W. W., Richmond.
Hillsman, J. A., Richmond.
Hurst, J. A., Pennington Gap.
Jones, J. F., Richmond.
Lake, N. P., Rectortown.
Lipscomb, P. D., Richmond.
Parrish, C. T., Portsmouth.
Sherrill, Z. V., Marion.
Tompkins, McCaw, Richmond.
Upshur, F. W., Richmond.
Woodson, G. C., Richmond.

WASHINGTON

Bridge, A. W., Eatonvile.
Carr, F. L., Montisano.
Grove, C. E., Spokane.
Johnson, A. E., Spokane.
Nagler, F. W., North Yakima.
Parsons, I. W., Hartford.

WEST VIRGINIA

Capito, G. B., Charleston.
Hicks, C. F., Welch.
Nutter, R. B., Enterprise.
Preston, C. B., Burnwell.
Truschel, C. M., Wheeling.

WISCONSIN

Hoffman, Elmer, Gotham.
Hough, A. G., Morrisonville.
Lowenhart, A. S., Madison.
Minahan, R. E., Green Bay.
Quick, E. W., Appleton.
Schneider, F., New London.
Schwarz, S. G., Granton.
Tupper, E. E., Eau Claire.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BOOKS ON MEDICINE FROM THE HISTORICAL POINT OF VIEW

To the Editor:—Please recommend a list of books on the history of medicine for a student's leisure reading. I have read Mumford's "Narrative of Medicine in America." RECENT GRADUATE.

ANSWER.—The following works would form an excellent introduction to the history of medicine. We name those which are mainly biographic because this department of history is the most interesting; it is persons rather than things that hold our attention.

Richardson, Benjamin Ward: "Disciples of Æsculapius," 2 volumes. This contains an excellent series of lives of men who did original work in medicine.

Mumford, James G.: "Surgical Memoirs," Moffatt, Yard & Co., New York, $2.50. An American volume quite equal to Richardson's in interest and information.

Osler, William: "An Alabama Student," Oxford University Press (American office), New York, $2.50. This is a very interesting series of biographic papers on American physicians of the last century.

Walsh, James J.: "Makers of Modern Medicine," Fordham University Press, New York (about $2.50). This traces the development of modern medicine from Morgagni to Pasteur.

"Masters of Medicine," Longmans, Green & Co., New York, $2 net. Sketches in separate volumes of Hunter, Harvey, Jenner, Simpson, Stokes, Claude Bernard, Helmholz, Brodie, Sydenham and Vesalius.

Camac: "Epoch-Making Contributions to Medicine, Surgery and the Allied Sciences," W. B. Saunders Co., Philadelphia. One of the most important contributions to the history of medicine; reprints of the papers that have made the ground-breaking progress in modern medicine, together with short sketches of the authors.

Packard, Francis R.: "History of Medicine in the United States, down to 1808," J. B. Lippincott Co., Philadelphia, net, $4. The early history of medicine in America is much more interesting than is usually thought, and this work of Dr. Packard's is both exhaustive and scholarly.

Walsh, James J.: "History of the Medical Society of the State of New York." Chapters in this book show how much more our grandfathers knew of medicine than we are likely to think.

Puschmann: "Handbook of the History of Medicine," 3 volumes (German). This standard work has revolutionized the history

of medicine by showing what fine work was accomplished in some of the old medical schools and especially by the old-time surgeons (thirteenth and fourteenth centuries).

Allbutt, T. C.: "The Historical Relations of Medicine and Surgery," an address at the International Congress of Arts and Sciences, St. Louis, 1904. *American Medicine*, Oct. 15, 1904. Also republished in pamphlet form.

Steven, J. L.: "Morgagni to Virchow: An Epoch in the History of Medicine," *Lancet*, Nov. 4, 1905.

In addition to those given, the following books are well worth reading:

Foster, Michael: "History of Physiology," Macmillan Co., New York, net, $2.25. Most fascinating and instructive; should be the first one thought of.

Moore, Norman: "Medicine in the British Isles," Oxford Medical Publications, 10s 6d.

Allbutt, T. C.: "Science and Medieval Thought," Macmillan Co., New York, net, $1.50.

Paget, S.: "Memoirs and Lectures of Sir James Paget," Longmans, Greene & Co., New York, net, $2.50.

Sprigge, S. Squire: "Life and Times of Thomas Wakley."

Osler: Æquanimitas, and other Essays," P. Blakiston's Son & Co., Philadelphia, $2.25.

Payne, J. F.: "English Medicine in Anglo-Saxon Times," Oxford Medical Publications, $2.90.

McKay, Stuart: "Ancient Gynecology," William Wood & Co., New York, $3.

Milne: "Surgical Instruments in Greek and Roman Times," Clarendon Press, $4.75.

Cordell, E. S.: "Medical Annals of Maryland."

The three following works are text-books of the history of medicine:

Bass: "Outlines of History of Medicine," G. P. Putnam's Sons, New York, $6.

Park, Roswell: "Epitome of History of Medicine," F. A. Davis Co., Philadelphia, $2.

Davis, N. S., Jr.: "History of Medicine," Cleveland Press, Chicago, $2.

"Biographical Cyclopedia of Medical History," edited by C. Wells Moulton, with a history of medicine from its origin to the nineteenth century, by J. Bostock, F.R.S., Saalfield Publishing Co., Akron, Ohio, $2.50. A useful reference book, as it contains brief biographies of a large number of prominent members of the healing art in all ages.

RECENT HISTORY OF SURGERY

To the Editor:—Please refer me to any publications containing information about recent advances in surgery and about the surgeons who have made important contributions to the subject in the past fifty years. H. N. C.

ANSWER.—The following references may be found of interest on this subject:

Lister, Lord: Points in the History of Antiseptic Surgery, *Lancet*, June 27, 1908.

Tinker, M. B.: America's Contributions to Surgery, *Indiana Med. Jour.*, November, 1902.

Hupp, F. L.: Achievements of Modern Surgery, *New York Med. Jour.*, Oct. 17, 1908.

Inge, J. M.: Developments of Modern Surgery, *Texas State Jour. Med.*, January, 1907.

Vander Veer, A.: Four decades of American Surgery, *Virginia Med. Semi-Monthly*, Dec. 27, 1907.

Niles, M. D.: Twentieth Century Surgical Problems, THE JOURNAL A. M. A., April 14, 1906, xlvi, 1071.

Bartlett, Willard: The Present Scope of Stomach Surgery, *St. Louis Med. Rev.*, March 23, 1907.

Oliver, J. H.: The Progress of Surgery in the United States, *Indiana Med. Jour.*, April, 1907.

Abbe, Robert: The Problems of Surgery, *Alabama Med. Jour.*, May, 1905.

Park, Roswell: Progress in Surgery in the Nineteenth Century, *New York Jour. Med.*, March and April, 1908.

Tinker, M.: The First Nephrectomy and the First Cholecystotomy, with a Sketch of the Lives of Dr. Erastus B. Wolcott and John S. Bobbs, *Johns Hopkins Hosp. Bull.*, August, 1901.

Kelly, Howard A.: Early History of Appendicitis in Great Britain, *Glasgow Med. Jour.*, August, 1903.

Ballance, C. A.: Then and Now in Surgery, *Lancet*, Oct. 20, 1906.

Ricketts, B. M.: Appendicitis, *Cincinnati Lancet-Clinic*, May 31, 1902.

Nutt, J. J.: Henry G. Davis: A Review of Some of His Work, *Medical Record*, Aug. 19, 1905.

Clark, Pierce: Biographical Sketch of Michaelis, the Pioneer Worker on Nerve Degeneration, *Medical Record*, March 17, 1906.

Wallace, C. H.: Triumphs of American Surgery, *Jour. Missouri Med. Assn.*, July, 1906.

Lowder, W. L.: Ephraim McDowell, *Canada Lancet*, May, 1903.

Recent work is well reviewed in the *Interstate Medical Journal* for January, 1905, 1906 and 1907, by Willard Bartlett, and for January, 1908, by M. B. Clopton.

TREATMENT OF TYPHOID

To the Editor:—I concur in nearly all of the opinions expressed by Dr. J. P. Roark (THE JOURNAL, April 3, 1909, p. 1089). I wish to call attention, however, to a point which is too frequently overlooked, namely that the *Bacillus typhosus* can not thrive in a medium that is acid; but does thrive well in a medium that is neutral or slightly alkaline, such as fresh milk. If we do not wish to give the bacilli a favorable medium in which to multiply we shall give the patient food that is liquid and acid in reaction. The buttermilk that Dr. Roark mentions is excellent provided that enough lactic acid has developed in it to prevent or inhibit the multiplication of the germs of typhoid fever; grape juice, because of its acidity, is an excellent food for typhoid fever patients, and any sour fruit sauce is unfavorable to germ life. I am convinced that in buttermilk and fruit juices we have the ideal food for typhoid fever patients. D. W. REED, Greeley, Colo.

COMMENT.—The use of acids and fruit juices in typhoid is undoubtedly beneficial, but it is doubtful whether the reaction of the intestinal contents can be made sufficiently acid to inhibit the growth of typhoid bacilli. The typhoid bacilli grow in slightly acid media. Further, late investigations show that typhoid fever is a bacteriemia and the bacteria in the blood can not well be influenced by acids given by the mouth, since an acid reaction of the blood appears to be incompatible with life.

SEROTHERAPY OF TYPHOID

To the Editor:—Please give me information regarding an antitoxin or vaccine for the treatment of typhoid fever.
J. W. NOLAN, M.D., Chittabalbie, Korea.

ANSWER.—The best known antitoxic serum is that of Chantemesse, which is prepared by injecting horses with the dead bacilli of typhoid fever. Chantemesse and others report great success with it, but it has not come into extensive use. V. C. Vaughan, of Ann Arbor, has also produced a residue from the bodies of the typhoid bacilli which he has employed in the treatment of typhoid fever. This agent seems to make the typhoid process longer, but not so severe. It is not probable that an antitoxin can be obtained for typhoid similar to the antitoxin of diphtheria, but the serums may do some good by stimulating the defensive activities of the body cells. The following articles may be referred to:

Brunon and Josias: Serum Treatment of Typhoid Fever, *Bull. de l'Acad. de Méd.*, Nos. 9-10, 1906; abstracted in THE JOURNAL, April 28, 1909, p. 1322.

Richardson, M. W.: Specific Treatment of Typhoid, *Boston Medical and Surgical Journal*, Oct. 3, 1907; abstracted in THE JOURNAL, Oct. 19, 1907, p. 1400.

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TO EXPEL BLOOD FROM BODY IN OBSTETRIC WORK

To the Editor:—In your issue of April 17, 1909, page 1303, abstract 116, you advise following Momburg's directions for expelling the blood from lower half of body in obstetric work. Will you please advise where such directions may be found?
GEO. T. CLARK.

ANSWER.—Momburg's articles on the subject were summarized in THE JOURNAL July 11, 1908, page 177, and Nov. 14, page 1742.

The Public Service

Army Changes

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ended May 1, 1909:

Brooks, W. H., capt., granted an extension of four months to his sick leave of absence.

Carter, W. F., Gibson, R. J., and Johnson, R. W., majors, ordered to report on May 20 at Washington, D. C., for examination for promotion.

Chamberlain, W. P., Page, Henry, Shockley, M. A. W., majors, relieved from duty at present stations in time to sail August 5 from San Francisco for Philippine service.

Krebs, L. L., capt., relieved from duty on transport *Thomas* and from treatment at San Francisco, and ordered to Fort Bayard, N. M., for duty at the Army General Hospital.

Dale, F. A., Roberts, W. M., Farr, C. W., Shook, J. R., Vose, W. E., captains, ordered to report at Washington, D. C., for examination for promotion.

Pinkston, O. W., 1st lieut., granted leave of absence for ten days.

Rafferty, Ogden, major, granted sick leave of absence for two months.

Rutherford, H. H., Ruffner, E. L., Whitmore, E. R., Brownlee, C. Y., captains, ordered to report at Manila, P. I., for examination for promotion.

Woodbury, F. T., capt., ordered to report at San Francisco for examination for promotion.

Palmer, F. W., capt., granted leave of absence for two months.

Richard, Chas., lieut.-col., relieved from duty at Fort Jay, N. Y., in time to proceed to San Francisco and sail August 5 for Philippine service.

Lambie, J. S., Jr., 1st lieut., relieved from duty at Fort Monroe, Va., in time to proceed to San Francisco and sail July 5 for Philippine service.

Bowman, M. D., M. R. C., ordered from Fort Baker, Cal., to the Depot of Recruits and Casuals, Angel Island, Cal., for duty.

Enders, W. J., M. R. C., granted sick leave of absence for twenty-six days.

Haley, J. C., M. R. C., relieved from duty at Fort Porter, N. Y., and ordered to Fort Jay, N. Y., for duty.

McCornack, C. C., M. R. C., ordered to active duty and assigned to Vancouver Barracks, Wash., for duty.

Kress, C. C., M. R. C., granted an extension of his leave of absence to June 1.

Wheate, J. M., M. R. C., relieved from temporary duty at Fort Snelling, Minn., and ordered to return to his proper station, Fort Lincoln, N. D.

Navy Changes

Changes in the Medical Corps, U. S. Navy, for the week ended May 1, 1909:

Trotter, C. E., and Bass, J. A., acting asst.-surgeons, appointed acting assistant surgeons from April 19, 1909.

Bucher, W. H., surgeon, ordered to treatment at the Naval Hospital, Las Animas, Colo.

Ohnesorg, K., surgeon, ordered to the *Louisiana*.

Breck, F. W., pharmacist, ordered to the navy-yard, Norfolk, Va.

Smith, W. B., P. A. surgeon, detached from the *Helena* and ordered to the *Denver*.

Blackwell, E. M., surgeon, detached from the Naval Academy and ordered to the *Chicago*.

McDonell, W. N., P. A. surgeon, detached from the Naval Academy and ordered to the *Hartford*.

Sutton, D. G., asst.-surgeon, detached from the Naval Academy and ordered to the *Tonopah*.

Clifton, C. L., asst.-surgeon, detached from duty at the Naval Hospital, Philadelphia, and ordered to the Naval Recruiting Station, Cincinnati.

Public Health and Marine-Hospital Service

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended April 28, 1909:

Wasdin, Eugene, surgeon, granted 1 month's leave of absence from April 22, 1909, on account of sickness.

Wertenbaker, C. P., surgeon, detailed to represent the service at the annual meeting of the Virginia State Conference of Charities and Corrections, to be held at Lynchburg, Va., May 19, 1909.

Trask, J. W., P. A. surgeon, granted 2 days' leave of absence from April 26, 1909.

Hotchkiss, Samuel C., asst.-surgeon, directed to proceed to San Francisco and report to the medical officer in command of the Marine Hospital for duty and assignment to quarters.

Bailey, C. A., acting asst.-surgeon, directed to proceed from St. John, N. B., to Quebec, Canada, for duty.

Bullard, J. T., acting asst.-surgeon, granted 9 days' leave of absence from March 31, 1909, without pay.

Carter, P. L., acting asst.-surgeon, granted 20 days' leave of absence from April 29, 1909.

Duffy, Francis, acting asst.-surgeon, granted 3 days' leave of absence from April 28, 1909.

Gale, R. G., acting asst.-surgeon, granted 30 days' extension of annual leave on account of sickness from Jan. 16, 1909.

Gale, R. G., acting asst.-surgeon, granted 30 days' leave of absence from Feb. 16, 1909, and 9 days' leave of absence, without pay, from March 24, 1909.

Gustetter, A. L., acting asst.-surgeon, granted 1 day's leave of absence, April 3, 1909.

Terry, M. C., acting asst.-surgeon, granted 7 days' leave of absence from April 11, 1909, under paragraph 210, Service Regulations.

Wetmore, W. O., acting asst.-surgeon, granted 2 days' extension of annual leave on account of sickness from April 17, 1909.

Wetmore, W. O., acting asst.-surgeon, granted 12 days' leave of absence from April 23, 1909.

Wherry, Wm. B., acting asst.-surgeon, granted 3 days' leave of absence from April 21, 1909, under Paragraph 210, Service Regulations.

Health Reports

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended April 30, 1909:

SMALLPOX—UNITED STATES

Alabama: Dallas County, Feb. 20-April 12, 12 cases; Selma, Feb. 28-April 12, 26 cases.
California: San Francisco, April 3-10, 1 case.
District of Columbia: Washington, April 10-17, 2 cases.
Georgia: Macon, April 11-18, 4 cases.
Illinois: Danville, April 4-18, 13 cases; Galesburg, April 10-17, 2 cases; Springfield, April 2-16, 6 cases.
Indiana: Fort Wayne, April 6-17, 2 cases; Indianapolis, April 11-18, 1 case; LaFayette April 12-19, 1 case.
Iowa: Davenport, April 11-18, 1 case.
Kansas: Kansas City, April 10-17, 15 cases; Wichita, April 3-10, 2 cases.
Kentucky: Newport, March 30-April 10, 14 cases.
Louisiana: New Orleans, April 3-17, 7 cases, 4 imported.
Massachusetts: Taunton, 1 case erroneously reported by health officer, January 9.
Michigan: Saginaw, April 3-10, 6 cases.
Minnesota: Duluth, April 8-15, 3 cases; Minneapolis, March 27-April 10, 6 cases.
Missouri: St. Louis, April 3-17, 3 cases.
Montana: Butte, March 23-30, 1 case; April 6-13, 1 case, imported.
New Jersey: Camden, April 10-17, 4 cases; Haddonfield, March 26-27, 2 cases; Plainfield, April 3-10, 2 cases.
Ohio: Ashtabula, April 10-17, 3 cases; Cincinnati, April 9-16, 7 cases; Cleveland, 1 case.
Tennessee: Knoxville, April 10-17, 2 cases; Nashville, 2 cases.
Texas: Galveston, April 2-16, 6 cases; San Antonio, April 10-17, 5 cases.
Washington: Spokane, March 27-April 10, 6 cases.
Wisconsin: Appleton, April 12-19, 1 case; La Crosse, April 10-17, 3 cases; Milwaukee, April 3-17, 25 cases.

SMALLPOX—INSULAR

Philippine Islands: Manila, Feb. 21-March 6, 6 cases, 1 death.

SMALLPOX—FOREIGN

Algeria: Bona, March 1-31, 18 cases, 12 deaths.
Brazil: Bahia, Feb. 27-March 13, 26 cases, 5 deaths; Rio de Janeiro, March 7-14, 21 cases, 9 deaths.
Canada: Halifax, April 3-10, 1 case.
China: Amoy, March 6-13, present; Hongkong, Feb. 27-March 6, 3 cases, 1 death.
Egypt: Cairo, Feb. 25-March 18, 77 cases, 28 deaths; Suez, Feb. 4-25, 27 cases, 2 deaths.
France: Nantes, March 14-21, 1 case; Paris, March 27-April 3, 5 cases, 1 death.
India: Bombay, March 6-13, 15 deaths; Calcutta, 264 deaths; Madras, March 19, 1 death; Rangoon, March 6-13, 11 deaths.
Indo-China: Saigon, Feb. 27-March 13, 15 cases, 6 deaths.
Italy: General, March 27-April 4, 56 cases; Naples, 15 cases, 2 deaths.
Java: Batavia, March 6-13, 3 cases.
Manchuria: Dalny, March 6-13, 1 case.
Mexico: Acapulco, Feb. 7-14, 3 cases; Monterey, April 4-11, 7 deaths.
Portugal: Lisbon, April 3-10, 2 cases.
Russia: Moscow, March 20-27, 35 cases, 11 deaths; Odessa, 4 cases, 1 death; St. Petersburg, March 13-20, 17 cases, 2 deaths.
Spain: Barcelona, March 23-April 5, 4 deaths; Madrid, March 1-31, 28 deaths; Valencia, March 26-April —, 7 deaths.
Straits Settlements: Singapore, Feb. 27-March 6, 1 death.
Turkey: Bassorah, May 20-27, present.

YELLOW FEVER

Barbados: April 3-10, 3 cases.
Ecuador: Guayaquil, March 13-27, 28 deaths.

CHOLERA

India: Bombay, March 16-23, 1 death; Calcutta, March 6-13, 98 deaths; Madras, March 13-19, 1 death; Rangoon, March 6-13, 6 deaths.
Russia: St. Petersburg, April 1-6, 11 cases 4 deaths.

PLAGUE

Azores: Fayal, April 1, 1 case.
Brazil: Bahia, Feb. 27-March 6, 2 cases, Rio de Janeiro, March 7-14, 4 cases.
China: Amoy, March 6-13, present; Chang Poo, March 13, epidemic; Chin Chow, present; Hongkong, Feb. 27-March 6, 3 cases, 2 deaths.
Ecuador: Guayaquil, March 13-27, 15 deaths.
Great Britain: Elstree (Plague Laboratory), Feb. 1-4, 1 case, 1 death.
India: Bombay, March 16-23, 436 deaths; Calcutta, March 6-13, 85 deaths.
Indo-China: Saigon, Feb. 27-March 13, 3 deaths.
Russia: Libau, March 28-April 5, 1 case.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Medical Legislation in Various States

FLORIDA

A bill has been introduced into the state legislature providing for a separate board of osteopathic examiners. The bill will probably become a law unless the medical profession of the state can be aroused to the danger of such a measure and the importance of securing its defeat.

COLORADO

Dr. S. D. Van Meter, secretary of the Colorado State Board of Medical Examiners, reports that the bill to amend the Colo-

rado medical practice act was defeated by a small margin. The osteopathic bill was also defeated. H. B. 61, providing for the licensing of all hospitals, dispensaries and institutions for the treatment of the sick by the State Board of Health, became a law. Several changes in the laws administered by the State Board of Health were also adopted. The optometry bill was defeated by the introduction of a bill placing the regulation of opticians in the hands of the State Board of Medical Examiners.

One of the most noteworthy occurrences of the legislative session was the introduction of the so-called West bill providing for a supplementary surgical license. This bill, known as S. B. 137, introduced by Senator West, provides that it shall be unlawful for any person to perform any surgical operation, by the use of any surgical instrument, in the nose or throat, or on the eye, ear, brain, deep structures of the neck or any of the abdominal or thoracic organs unless he possesses a license from the State Board of Medical Examiners authorizing him to perform such surgical operations. A penalty of fine, imprisonment or both is provided. The State Board of Medical Examiners is authorized to grant licenses to perform surgical operations on any one or more parts of the body to any person who shall file an application and satisfy the board of his ability. Only those persons who possess licenses to practice medicine under the laws of the state are eligible to obtain such a license. General reputation, preliminary education, courses of study pursued, college degrees received, number of years of practice, experience in hospitals, licenses to practice medicine in other states or countries, experience as a teacher, and experience in the practice of operative surgery are to be considered. Circumcision and the necessary surgical procedures in childbirth, except Cesarean section, as well as any emergency operations, are exempt.

The introduction of this bill by a layman is of singular significance, since it shows, at least, interest enough in medical qualifications and licensure to lead to the introduction of a bill requiring stricter and more rigid qualifications of the surgeon than of the general practitioner. Such a law would practically make two classes of physicians, those possessing the qualification and permission to perform all surgical operations and those without such a qualification. The suggestion is a novel one, at least so far as medical license in this country is concerned.

ILLINOIS

The osteopathic bill has been advanced to third reading in the house and will probably pass that body. S. B. 447 to reorganize the state charities and the correctional system, now on second reading in the senate, is a combination of three bills introduced for the same purpose. As it now stands, the bill is a non-partisan one and contains the best features of the three previous bills. It provides for a board of administration of five and places the entire management of the state charitable, penal and correctional institutions in their hands. The bill provides for an alienist, a penologist, an expert on charitable work, a business man as an adviser on fiscal and administrative matters, and a president. Members of the board are to be appointed by the governor and are to draw salaries of $7,500 per annum. All employés of all state institutions with the exception of superintendents and wardens, are to be under civil service rules. A system of business administration under a centralized management, as well as a carefully worked-out system of inspection, is also provided for. This bill, if adopted, will put the state institutions of Illinois in a position to compare most favorably with those of any state in the union and far in advance of most of them.

IOWA

The optometry bill has been defeated in the lower house.

MISSOURI

An amendment to the medical practice act has been adopted which prevents a physician whose license has been revoked by the state board from continuing practice, pending an appeal. According to the amendment, when a license is once revoked, the physician affected can not resume practice until the appeal is decided in his favor and the license restored.

MASSACHUSETTS

Most of the objectionable bills introduced into the legislature have been defeated. These include several antivaccination bills, an antivivisection bill, an optometry bill, and the bill to consolidate all the boards of registration under one head. A bill relative to the charging of juries, which has some bearing on expert testimony, was defeated. The osteopathic bill, which was voted down, has been reconsidered, and is still before the house.

RHODE ISLAND

The optometry bill passed the house on April 6 and the senate on April 17, and has been signed by the governor.

Optometry in Texas

The following letter has such a marked bearing on the problems of medical legislation as applied not only to so-called "optometry" laws but also to the entire question of sectarian legislation and the attitude of physicians toward it, that the letter is here presented. The problems which the committee of the Dallas Medical and Surgical Society encountered are the same as those confronting the profession elsewhere. The principal difficulty is to arouse the profession to the dangers involved in legislation of this type. The next difficulty is to convince prominent and intelligent laymen that such legislation involves questions which vitally concern and affect both themselves and their families, the usual tendency of the public being to regard all of these matters as "doctors' rows." The third and perhaps the most difficult problem involved is the proper and effective presentation of these questions to the members of the state legislatures. Irrational and partisan medical legislation is opposed by physicians, not because their personal interests are threatened or involved, but because they know that lowering the standards of medical practice involves dangers to the public. These facts must be shown to the legislature specifically and not in general terms, and all possible suspicion of personal interests should be eradicated. The average member of the legislature instinctively suspects that any man (or body of men) who persistently and uniformly urges a certain line of legislation, does so from selfish motives. The sectarian, being usually a recent convert and having but little scientific training, is usually more enthusiastic and zealous than the average physician. Having a strong selfish interest in the proposed law, he is also generally inclined to do more work and make greater sacrifices to secure his ends. It is consequently found that the representatives of the osteopath, optometrist, chiropractic, naturopath and other latter-day sects is generally on the ground before the legislature convenes and stays there until the last bill is passed, while the physician contents himself with sending a committee to represent him, which committee usually devotes a few hours or at most a day or two to a hasty visit to the state capital. These facts, as well as those brought out by our correspondent's letter, explain why bills have been put through state legislatures by a handful of sectarians, although opposed, at least in spirit, by the medical profession of the state. The letter is as follows:

To the Editor:—Recently some of the Texas opticians, who styled themselves "optometrists," have been agitating an "Act to Define and Regulate the Practice of Optometry, to Create a Board of Examiners in Optometry for the Examining and Licensing of Optometrists, to Prescribe the Qualifications of Applicants in Optometry, etc." This bill passed the Texas Senate unanimously in January. Early in February, the Dallas Medical and Surgical Society appointed a committee to study this bill and to advise the society as to its import; and also to take any other steps the committee saw fit.

After some effort, this committee succeeded in getting five specialists of the state to drop their business, pay their own expenses to Austin, and confer with the House Committee on Public Health. These specialists explained to the house committee the lack of justification for such a bill, the impossibility of correct refraction without a cycloplegic, the ex-

treme delicacy of the process of refraction, the dangers of cycloplegics in the hands of ignorant men, the dignity of license by a board appointed by the state, the inadvisability of making so many "eye-doctors" by such a quick process, etc., etc.

The house committee reported the bill unfavorably to the house.

The similar committee in the senate was somewhat handicapped, since it had received explanations of the bill from one standpoint only—that of the opticians.

The house unanimously killed the bill.

During the progress of the discussion of the bill in the committee, some peculiar but very important conditions developed:

1. The opticians present claimed a specialty of "optometry," in which they were experts. They were not "opticians." The sign of the most prominent one present, however, had read "Optician" for ten to fifteen years; and this sign still hangs in box-car letters over his place of business. Another well-known optician and jeweler displayed several large signs, which seemed to embrace everything: "Eyes Examined," "Expert Optometrists, "Refracting Opticians," "Manufacturing Opticians," etc.

2. Several cases were reported in which opticians had used atropin, or determined the refraction of diseased eyes. A case of glaucoma caused by an optician's having used atropin was cited. The best optician in the state (and, by the way, a fine man personally) was reported as having fitted a pair of glasses to eyes in one of which a piece of steel was imbedded. He was present before the house committee.

3. The oculists as a whole were lukewarm in their opposition to the bill. Some were lukewarm naturally; some had acquired lukewarmness because they thought or seemed to think that atropin was not necessary to correct refraction; and some had had lukewarmness thrust upon them because they were working in conjunction with opticians or owned stock in optical houses.

HENRY B. DECHARD, M.D., Dallas, Tex.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month

SECOND WEEKLY MEETING

EXTERNAL EAR

AURICLE

MALFORMATIONS.—Undeveloped helix, absence of lobule, microtia, polyotia.

PERICHONDRITIS.—Etiology, treatment.

OTHEMATOMA.—Pathology, treatment.

TUMORS.—Sebaceous cyst, fibroma, angioma, sarcoma, epithelioma; diagnosis of each.

CUTANEOUS AFFECTIONS.—Acute eczema: diagnosis, treatment.
Chronic eczema: symptoms, diagnosis.
Noma: pathology, diagnosis.
Lupus erythematosus: symptoms, treatment.
Lupus vulgaris: etiology, diagnosis.

EXTERNAL AUDITORY MEATUS AND CANAL

OTITIS EXTERNA CIRCUMSCRIPTA, FURUNCLE.—Etiology, symptoms, differential diagnosis.

OTITIS EXTERNA DIFFUSA.—Symptoms, prognosis, treatment.

OTOMYCOSIS.—Diagnosis, *aspergillus niger*, *A. glaucus*, treatment, recurrence.

FOREIGN BODIES IN AUDITORY CANAL.—Diagnosis, prognosis, treatment in detail for animate objects and for inanimate objects.

IMPACTED CERUMEN.—Symptoms, treatment.

SYPHILIS OF AUDITORY MEATUS.—Diagnosis, local and internal treatment.

EAR COUGH.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

FLORIDA: Tallahassee, May 19-20. Sec., Dr. J. D. Fernandez, Jacksonville.
MASSACHUSETTS: State House, Boston, May 11-13. Sec., Dr. Edwin B. Harvey, Room 159, State House.
MISSISSIPPI: State Capitol, Jackson, May 11-12. Sec., Dr. S. H. McLean.
MISSOURI: Kansas City, May 17-19. Sec., Dr. J. A. B. Adcock, Warrensburg.
NEBRASKA: State Capitol, Lincoln, May 25-27. Secretary, Dr. E. J. C. Sward, Oakland.
NEW YORK: Albany, May 18-21. Mr. Charles F. Wheelock, Albany.

COUNCIL ON MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

Fifth Annual Conference, held at the Auditorium Hotel Chicago, April 5, 1909

(Continued from page 1457)

Report on Medical Curriculum

DR. BEVAN: I would like to make a brief statement in regard to this curriculum and this committee. The entire subject of medicine was divided into ten parts, a chairman for each part appointed, and with the chairman nine other members were selected for each section, thus providing one hundred men specially qualified in their different departments to develop a medical curriculum. This medical curriculum to be reported to-day is regarded by the Council as educational and suggestive, and is not advanced as a hard and fast requirement. In order that there should be no misunderstanding on this point, the following resolution was unanimously adopted:

WHEREAS, The object of the Council on Medical Education in appointing this committee on curriculum was that such a curriculum should be entirely educational and suggestive; and

WHEREAS, The impression prevails among medical teachers and members of state medical examining boards that the curriculum is being framed for the purpose of having it serve as a standard to which medical colleges must conform, or be condemned by the state authorities as not in good standing, therefore, be it

Resolved, That every publication of any curriculum hereafter to be made by the Council, its members, or its officers as such, shall state explicitly that the Council does not consider it in the interests of true progress in education that any standard curriculum whatever shall be uniformly adopted by all medical colleges.

It seems to me desirable to make that statement; at the same time, I am personally—and I think all of the members of the Council are—impressed with the fact that the work done by this Committee of One Hundred is really of very great value.

MEDICAL CURRICULUM*

The following gives the complete schedule of hours in the various subdivisions of the medical curriculum as given in the reports of the ten subcommittees. At a subsequent meeting of the ten chairmen the totals for each department by vote were reduced to the figures in the third column.

Subject and Subdivision.	Hours.	Original Total.	Reduced Total.
I. Anatomy	...	760	700
Dissection	370		
Histology	140		
Neurology	90		
Embryology	90		
Topographical Anatomy	70		
II. Physiology, Organic and Physiological Chemistry	...	550	530
Organic Chemistry	80		
Physiological Chemistry	200		
Physiology	270		
III. Pathology and Bacteriology	...	500	500
Bacteriology (approximately)	200		
Pathology	300		
IV. Pharmacology, Toxicology and Therapeutics	...	268	240
Pharmacy, Chemical Toxicology and Elemental Prescription Writing	40		
Experimental Pharmaco-Dynamics	60		
Systematic Pharmacology and Prescription Writing	72		
Non-Pharmacal Therapeutics	16		
General Therapeutics and Prescription Writing	48		
Therapeutic Clinics and Prescription Writing	32		
V. Medicine	...	885	890
Physical Diagnosis, Normal	45		
Lectures or Recitations	90		
Diagnostic Clinics (Observation Classes)	30		

* The complete reports of the various subcommittees are not ready for publication, but will be issued soon in pamphlet form and may be had on application.

Clinical Pathology	60			
Ward Classes, Diagnosis (Junior)	30			
Pediatrics (Junior)	100			
Neurology (Junior)	60			
Didactic, or Recitation, or Case Method	30			
Ward and Laboratory (Senior)	180			
Clinic and Clinical Conference	60			
Out-Patient Clinics	30			
Neurology	90			
Pediatrics	80			
VI. Surgery	...		680	650
Bandaging and Practice Dressing	30			
Surgical Pathology	60			
Surgical Anatomy	30			
Principles of Surgery	210			
Minor Surgery	60			
Regional Surgery	150			
Operative Surgery	50			
Orthopedic Surgery	45			
Genito-Urinary Surgery	45			
VII. Obstetrics and Gynecology	...		300	240
Obstetrical Lectures, Recitations, Manikin Work, etc.	120	180		
Obstetrical Clinical Work (Dispensary, Hospital and Laboratory)	30			
Amphitheater Clinics	30			
Gynecology Lectures and Recitations	60	120		
Gynecology Dispensary Clinics, "Touch Course"	30			
Gynecology Amphitheater Clinics	30			
VIII. Diseases of Eye, Ear, Nose and Throat	...		140	140
Eye—Didactic (Entire Class)	15	50		
Eye—Clinics (Hospital and Dispensary)	15			
Eye—Section Work (Dispensary and Hospital)	20			
Ear—Didactic	20	40		
Ear—Clinical	20			
Nose and Throat—Theoretical	20	50		
Nose and Throat—Practical	30			
IX. Dermatology and Syphilis	...		90	90
X. Hygiene and Medical Jurisprudence	...		305	120
1. Public Health and Hygiene—The Legal Mechanism for the Control of Disease, Federal State and Municipal	12			
Vital Statistics	4			
Transmissible Diseases and Their Epidemiology	60			
Occupational Diseases, not including infections	10			
Milk Supply in Relation to Disease	10			
Food Supply, Meat Inspection, etc.	10			
Water Supply and Sewage Disposal	20			
Sanitary Engineering and Architecture, including Plumbing, Ventilation, Hospital, School, Dwelling, and Public Sanitation, etc.	3			
Social Economics—Economic Cost of Disease	10			
Publicity in Relation to Public Health	...			
Disinfection	10			
Sanitation of Travel	5			
Inspection of Hotels and Restaurants in Relation to Cleanliness, Sanitary Facilities, etc., and also Medical Inspection of Those Who Handle Food, Water, etc.	2			
School Hygiene	10			
Hygiene of Public Institutions, for the Insane, Feeble-Minded, Deaf, Dumb, Blind and Correctional Institutions	30			
Eugenics	...			
Hygiene of Venereal Diseases. (Course to be provided and coordinates by subcommittee)	...			
Sanitary Aspects of Embalming, Funeral Direction and the Transportation of the Dead. (Course to be provided and coordinated by subcommittees.)	...			
Naval and Military Hygiene. (Course to be provided and coordinated by subcommittees.)	...			
Tropical Medicine. (Course to be provided and coordinated by subcommittees.)	...			
Personal Hygiene. (Time will vary according to amount of time chargeable to other subcommittees.)	28			
2. Medical Jurisprudence. (Time will vary according to amount of time chargeable to other subcommittees.)	60			
3. Medical Ethics, Publicity, Economics, Organization, Relationship, etc.	10			
Grand total			4,478	4,100

The Medical Curriculum from the Standpoint of the State Examining Board

DR. GEORGE W. WEBSTER, CHICAGO

I was asked a few days ago to open the discussion on this subject from the standpoint of the medical examining boards. I am very glad to do so, chiefly because it gives me the opportunity to express my appreciation not only of this kind of work, but of this particuar piece of work which this Committee of One Hundred has performed. I think from the standpoint of the examining boards, the report of this Committee of One Hundred is, without question, the most important piece of work the Council on Medical Education of the American Medical Association has ever done, and for many reasons. It is important from its educational point of view and not simply because of its value as a guide to examining boards. Of that I shall speak in a moment. In times past the curriculum of the average medical school might have been described as were the inhabitants of Europe in one of our very ancient histories, "a heterogeneous mixture of people promiscuously thrown together," and the average medical curriculum in the average medical school was, like the "peace of God that passeth all understanding." The work of this committee will help very much to correct this condition of affairs.

Now, we may inquire, Why is the medical examining board interested in a standard curriculum? The examining board is not engaged in medical teaching, but it is vitally interested in educational methods. Why? Because the examining boards have realized for a long time what many teachers and medical educators have not seemed to grasp fully when we discuss, as we do at such length, the character of the medical examination as conducted by examining boards. The examining boards must also take this position: If a young man is compelled to spend eight years at a grammar school, four years at an approved high school, the character of which is prescribed and approved, and then four years in a medical school in which there is a standard curriculum as described here this forenoon, and in which right methods are employed, then you have supervised that man's education for sixteen years, during which time the methods pursued by him in his education are correct, and the product must be good. We are interested, gentlemen, in the product. That is why state boards are interested in your methods. If your methods are correct, if the equipment is all that it should be, and we have supervised that man's education from the time he enters the grammar school until he leaves the medical school—sixteen years—I care very little whether he passes the medical examination or not, except as a matter of form. In such cases men will be better equipped for the practice of medicine because they will have been sifted out at the grammar school, the high school, and the medical school before they come to the examining board. The examining board is interested in the product and is vitally interested in the methods by which that product is produced. This work is of vital importance from an educational standpoint, but it will also be of very great value to examining boards for this reason: It is necessary for every examining board to have certain rules and to have a schedule of minimum requirements that are deemed requisite for a medical college that is to be considered in good standing. Such a schedule of minimum requirements was reported to this body a year ago, was satisfactory in every way, and similar to that which is in operation in the work of most of the examining boards. But such a schedule does not go far enough. It is not quite specific enough. For example, in the rules of each of these boards we have a rule something like this: the character of the entire equipment, including teachers, laboratory equipment, clinical facilities, etc., "shall be such as obtains in the majority of medical colleges in the United States." Well, a college says, What is the character of the equipment that obtains in the majority of medical colleges in the United States. With perhaps the exception of Dr. Bevan, Dr. Colwell, or Dr. Zapffe, or perhaps some three or four men in the hall, there is no one that knows what that average equipment is. Neither the medical colleges nor the state examining boards have had any very clear conception of exactly what that equipment should be, and even among this picked committee there is not an absolute consensus of opinion, but very nearly so, as to what should be considered a standard curriculum or standard equipment. We have a schedule of minimum requirements, as adopted last year, and which is in operation by most of the state boards. If we can go one step further and describe to a certain extent the character of that equipment, and the character of teaching meth-

ods, if you please, that should be adopted by the medical schools, you can see how much advantage that will be. Of course, I want all of you to understand clearly that I do not believe we can or should adopt a schedule of minimum requirements that specifies how many hours shall be devoted to this or that subject, and exactly the equipment that shall be considered the minimum, but I do believe the boards can give this information to the medical schools in an advisory way—at least, for the present—and can have this as a guide for themselves in the conduct of the examinations. Later on we may be able possibly to specify more exactly in regard to the number of hours, in regard to the exact equipment, but there is danger in specifying too minutely just what is demanded in the way of equipment or the exact number of hours in each individual branch.

Some five years ago I presented to the National Confederation of State Medical Examining and Licensing Boards a standard curriculum, which was not original with me, but merely a continuation of the work that had been done by others, and in which I made certain arguments in favor of such a standard curriculum, and, with your permission, I will present them here, as I think they will bear very well on the present situation, and I see no reason to materially change my mind from that time to this:

"The adoption of a standard uniform curriculum will be in the interests of an improved, as well as a higher standard of medical education. It will add symmetry to the course. It will give to each subject that relative importance which rightfully belongs to it, and no more. It will enable students to receive due credit for work done in any recognized school which adopts and conforms to this standard, thus enabling them to take the first two years in institutions remote from large cities, going to the latter for the last two years of clinical instruction. It is the most important single step toward future inter-state reciprocity on a rational basis. It will result in closing up some inferior schools of low grade. It will serve as a basis for reform in state board examinations. In most state boards all studies have equal rank, the applicant being required to answer to the same number of questions in each subject, a manifest injustice to the applicant. For example, some boards ask as many questions on physical diagnosis, gynecology, pediatrics and obstetrics, as they do in general medicine or general surgery, while the relative importance of these subjects and the relative time devoted to them is much smaller than to the major subjects."

I want to emphasize the fact that the greatest value of the work of this committee is in an educational way as a guide to the colleges in improving, standardizing and co-ordinating the work of medical teaching.

"A uniform standard will be set up for the whole country, instead of the heterogeneous regulations of state authorities. Singleness of policy will be substituted for the present unfortunate diversity of practice. It will unify and harmonize effort and will make possible the interchange of licensure, reciprocity. It will enable students to receive credit for work done and to make their scientific and laboratory instruction in one place or state, and complete their clinical course in the large cities, where there are abundant clinical opportunities.

"The medical degree will have a reasonably uniform standard of value, and will mean something to its holder.

"We realize that quantitative standards are educational evils, but sometimes it is 'any port in the storm.'

"We do not assume for a moment that what we have suggested is perfection; that we have attained the ideal; we know that after the summit is reached, all roads lead downward. We only offer this as a working plan.

"In this evolution of an ideal, or even a satisfactory, medical curriculum, I freely grant that there is no such thought in my mind as arriving at the ideal; there is no such thing as a stopping place, a resting place; but may there not be a halting place, where we may go forward as a unit, as a solid phalanx and not as stragglers, each one fighting by himself and for himself?"

(*To be continued*)

Medical Education and Nostrums, Tenth Letter

This is the last of a series of letters issued jointly by the Council on Medical Education and the Committee on Medical Teaching of the Council on Pharmacy and Chemistry:

To Medical Teachers:—This letter contains some suggestions to the clinical departments. It is especially important that the clinical instructor should set an example, to the student and hospital interne, of clean, careful and painstaking prescribing; for it is the clinical instructor who finally molds the practice of the young physician. He is the embodiment of the success for which the beginning practitioner is striving, and thus he is looked on with especial confidence and respect. His methods and ways are carefully copied in all things, and his example, therefore, is extremely potent. A thoughtless or a careless word or act may have a far-reaching influence on the student in this plastic period. One clinical department is as important as another in this respect; and the influence of the youngest assistant makes itself felt, as well as that of the department directors. Wherever nostrums are habitually used the graduates will be nostrum-prescribers. Wherever thoughtless empirical therapeutics is the fashion the graduates will be thoughtless empiricists. Wherever the clinical staff has forsaken the standard materia medica, the graduates will also forsake it.

The practice, prevailing in many hospitals and dispensaries, of prescribing frequently-used mixtures by serial numbers, or by alliterative or suggestive titles, is an example in point. It robs the student of therapeutic independence, and induces habits of indolence in prescribing, which form an easy step to the use of nostrums.

Confederation of Reciprocating Examining Boards to Meet

The annual meeting of the American Confederation of Reciprocating, Examining and Licensing Medical Boards, will be held at the Seelbach Hotel, Louisville, Ky., May 12, the session to begin at 10 o'clock a. m. Reports regarding medical curriculum, constitution and preliminary education for entrance to recognized medical colleges will be presented.

Colorado January Report

Dr. S. D. VanMeter, secretary of the Colorado State Board of Medical Examiners, reports the oral and written examination held at Denver, Jan. 5-16, 1909. The number of subjects examined in was 8; total number of questions asked, 80; percentage required to pass, 75. Thirty-two applicants were licensed at this examination, 4 of whom passed the examination, and 28 were registered on presentation of satisfactory credentials, including state licenses. Four of the applicants appearing for examination failed to make the required percentage. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent.
Denver and Gross College of Medicine	(1908)	76.6, 81.7
Johns Hopkins Medical School	(1908)	86.8
McGill University, Canada	(1906)	77.5

LICENSED ON CREDENTIALS

College	Year Grad.	State Licenses.
George Washington University	(1906)	Dist. Colum.
Bennett College of Eclectic Medicine and Surgery	(1898)	Illinois
College of Physicians and Surgeons, Chicago	(1892)	Illinois
Northwestern University Woman's Medical School	(1898)	Iowa
Rush Medical College	(1896) Indiana; (1906)	(1907) Illinois
University of Iowa, Homeopathic Department	(1893)	Iowa
Medical College of Indiana	(1894)	Illinois
Kentucky School of Medicine	(1893) Minnesota; (1897)	Ohio
University of Louisville	(1901)	Indiana
Northwestern University Medical School	(1894)	Illinois
Missouri Medical College	(1898)	Oklahoma
University Medical College, Kansas City	(1908)	Kansas
Barnes Medical College	(1899)	Kansas
Ensworth Medical College	(1908)	Kansas
University and Bellevue Hospital Medical College	(1899)	New York
Columbia University, College of Physicians and Surgeons, Kentucky;	(1903) (1905)	New York.
University of Buffalo	(1884)	New York
Dartmouth Medical School	(1879)	Mass.
Medical College of Ohio	(1893) (1907)	Ohio
Starling Medical College	(1907)	Ohio
Pulte Medical College	(1875)	Tennessee
Miami Medical College	(1907)	Ohio
Western Reserve University	(1882)	Nebraska

FAILED

College	Year Grad.	Per Cent.
Denver Homeopathic College	(1908)	63.3
Baltimore Medical College	(1908)	70.4
St. Louis College of Physicians and Surgeons	(1901)	60.
Meharry Medical College	(1908)	55.4

New Mexico January Report

Dr. J. A. Massie, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan. 11, 1909. The number of subjects examined in was 13; total number of questions asked, 108; percentage required to pass, 75. The total number of

candidates examined was 6, all of whom passed. Nineteen candidates were licensed on presentation of satisfactory credentials. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
Kansas Medical College	(1904)	78.
University of Michigan	(1907)	83.5
Medical College of Georgia	(1907)	88.
University of Nashville	(1900) 80.8; (1908)	93.
University of Tennessee	(1901)	75.5

LICENSED ON CREDENTIALS	
College	Year Grad.
University of Arkansas	(1891)
Rush Medical College	(1892)
College of Physicians and Surgeons, Chicago	(1904)
Northwestern University Medical School	(1898)
Hospital College of Medicine, Louisville	(1890) (1904)
Louisville Medical College	(1886)
University of Michigan	(1906)
Barnes Medical College	(1897)
St. Louis College of Physicians and Surgeons	(1889), (1902)
Omaha Medical College	(1898)
Jefferson Medical College	(1890)
Vanderbilt University	(1884), (1886), (1893), (2, 1900)
Galveston Medical College	(1870)

Book Notices

MOVABLE KIDNEY. By C. W. Suckling, M.D., M.R.C.P., Consulting Physician to the Queen's to the Children's and to the Orthopedic and Spinal Hospitals. Cloth. Pp. 155. Birmingham: Cornish Brothers, 37 New street, 1909.

This is the second edition of a work which attempts to show that movable kidney may be found very frequently if correctly sought for, and that it is the cause of a much larger number of ailments than is commonly supposed.

Suckling's position may be briefly stated as follows: If a careful and skilful examination of patients be made the right kidney can be palpated in about 6 per cent. of the males and in 40 per cent. of the females. A normal kidney can not be felt. Every palpable kidney is, therefore, a proof of a pathologic condition, and symptoms referable to this lesion may be elicited if they are sought after. Every movable kidney is not only pathologic and productive of symptoms, but is to be treated by surgery, i. e., nephropexy. Few contraindications to the operation exist, such as old age, weak heart, or advanced Bright's disease. To be sure that a loose left kidney be not untreated, there should be an exploratory incision down to this kidney whenever nephropexy is performed on the right kidney, and if the left viscus is found movable it also should be anchored in place. This exploratory operation is to be done whether the left kidney be palpable before the operation or not. The reason why every movable kidney is to be thus treated by operation is that it is sure to produce disease, chiefly through toxemia due to faulty elimination, the result of mechanical interference with its function, especially the free outflow through the ureter. These diseased conditions vary all the way from mild nervous disorders, neurasthenia, insomnia, headaches, etc., to albuminuria, hematuria, pyuria, leucorrhea, dilatation of the stomach, rectal pain, incontinence of urine, constipation, diarrhea, colitis, mucous colitis, sexual troubles, backache, epilepsy, hysteria, mental failure and insanity. "Movable kidney has now been proved to be a common cause of insanity." "When the kidneys are properly fixed up, in quite nineteen cases out of twenty the insanity is cured."

How to take such a monograph is a question. Should it be treated seriously, should argument be attempted to prove the falsity of the conclusions reached by the author, or should it be utterly ignored as unworthy of notice or be mercilessly shown up as ridiculously absurd? We are perhaps not called on to perform any of these tasks. We merely express the opinion that there is some truth in much that is said concerning movable kidney and its relation to varied forms of illness. But the work is based on such flimsy pathologic theory, the histories of cases are so slipshod, the diagnoses so loosely made, the whole book is pervaded by such intense and even offensive egotism and such ignorance of the studies and experiences of others along similar lines, it betrays such lack of a scientific and logical reasoning and such a wild jumping at unwarranted conclusions that one must in all seriousness condemn the book and be truly thankful that the author at the end of his preface says: "I do not intend to write any more on the subject of movable kidney." We can only trust that he will be true to his word.

DISEASES OF THE HEART. By James Mackenzie, M.D., M.R.C.P. Cloth. Pp. 386, with illustrations. Price, $9.00. New York: Oxford University Press.

Dr. James Mackenzie is well-known as a writer on disease of the heart and allied subjects; especially is he an authority on the physiologic disturbances of this organ, and naturally a large part of his book is devoted to an interpretation of its physiologic action and its perversions.

Thoughtful and judicious comments and records of the author's observations and experiments are found throughout the work, which is full of originality, and, unlike many treatises, is not a mere compilation. Everything is briefly stated, there are few repetitions, and the clear, simple English makes agreeable reading. The book is copiously illustrated, chiefly with radial, carotid, jugular and apex tracings, but also with diagrams and sketches.

Dr. Mackenzie distinguishes Nothnagel's vasomotor angina pectoris from the more common form, which in his opinion is not due to hypertension, as his own measurements of arterial tension during attacks do not prove its existence. He also states that the cause of constriction of the chest, which is often severe and accompanies or follows the characteristic pain of angina, is due to spasm of the intercostal muscles. Instrumental examination of the arteries, veins and apex of the heart is described fully, but Mackenzie believes the finger to be the best determiner of the condition of the circulation. In acquiring a trained perception, however, instrumental examination is a great help. Far-reaching deductions have been drawn from variations in so-called arterial or blood pressure and diastolic pressure. In his opinion the latter, as recorded by the clinical instruments usually employed, is fallacious.

The scope of the volume will be comprehended from the following list of subjects of chapters: Principles underlying the production of heart failure; fundamental functions of the heart muscle-cells; development, anatomy and physiology of the heart; preliminary examination of the patient; respiratory symptoms; reflex or protective phenomena; angina pectoris; heart affections and a hypersensitive nervous system; instrumental methods of examination; position and movement of the heart; examination of the arterial pulse; arterial pressure; venous pulse; increased frequency of the heart's action; sinus irregularities; extrasystole; the nodal rhythm; affections of the conducting functions of the primitive cardiac tissue; exhaustion of contractility; dilatation of the heart; acute febrile affections of the heart; valvular defects; cardiosclerosis; adhesive mediastinopericarditis; congenital affections of the heart; heart disease and pregnancy; chloroform in heart affections; prognosis; treatment.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College. Cloth. Pp. 548, with illustrations. Price, $3.50. Philadelphia: W. B. Saunders Co., 1908.

This book concerns itself with the physical diagnosis of thoracic and abdominal diseases. Diseases of the head, the extremities or of the nervous system are not included. There is no consideration of special laboratory technic, such subjects as the examination of the blood, feces, urine or stomach contents being referred to only incidentally. In the discussion of physical signs especially emphasis is laid on the regional anatomy, both normal and pathologic, as well as on normal and disturbed function, as explaining the origin and mechanism of the physical signs of health and of disease. Explanations are in general clear, and there is little or no obtrusion of dogmatic opinions of the author or of a confusing mass of more or less conflicting notions of others. The book shows, as stated in the preface, that it has been carefully adapted by a practical teacher to the needs of the class-room. While some topics are considered in a manner that might at

first strike one as somewhat elementary, this after all is an advantage, especially when considering the book as one suited to the needs of the undergraduates. Of very great value are the illustrations showing regional anatomy, location of physical signs, etc., together with numerous reproductions from photographs of patients suffering from the various diseases under consideration or of the organs in the morbid state in which the physical signs are to be noted. Many of these illustrations will help materially to a better understanding of the mechanism of the signs and will impress forcibly on the student the physiognomy of disease.

We question the taste of inserting some of the studies from the model. Not only is the female form not quite as well suited to the study of physical diagnosis of the chest as is the male form, but some of the models would seem to be more interested in the artistic pose and in displaying their beauty than in such prosaic things as location of painful spots, friction sounds, etc. And some of them, e. g., the one on page 153, are too suggestive of corset advertisements, or even of the photographs on sale in the streets of Paris to have a place in a book of this character.

As a whole, the book has been carefully prepared, is pervaded by a sane, judicial tone and deserves to take high rank among the good books in English on the subject of physical diagnosis. And we are pleased, on one account at least, to see physical diagnosis divorced from the more strictly laboratory diagnosis, for, while the two must always go hand in hand, it is well at the present time to emphasize the importance of auscultation, percussion, etc. There is too often seen a tendency to exalt the laboratory findings and to degrade those of the ordinary physical examination as out of date and old fashioned. Da Costa's work will serve to call attention to the fact that even without the aid of elaborate instruments of precision or of complicated laboratory technic, the unaided yet trained eye, ear and finger will, if guided by a logically acting brain, lead to a reasonably accurate understanding of many of the processes of disease.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Herausgegeben von Prof. Dr. Phil. et Med. Carl Oppenheimer, Berlin. Instalments 2 to 14. Paper. Price, 5 marks each. Jena: Verlag von Gustav Fischer, 1909.

The general statements made in the review of the first instalments of Oppenheimer's "Handbuch" (THE JOURNAL, July 11, 1908, li, 147) may be equally well applied to each succeeding issue and to the series as a whole. Further, it may be well here to direct attention particularly to the scope and thoroughness of the work, which is more deeply impressed on the reader by each additional instalment. At the end of the thirteenth instalment a general index of the whole work is given which appears to cover the entire field of biologic chemistry in its various branches and divisions.

In the later instalments there appear sections devoted to the following subjects: "Proteins," "Animal Coloring Matter," "Colloids," "Chemistry of the Cells," "Blood and Lymph," "Secretory Glands and Secretions," "Digestion," "Gases of the Body and their Interchange" and "Food Metabolism." Under each of the above main headings from one to eleven subchapters are incorporated, each chapter an exhaustive work on the particular phase it covers, full of the latest findings of biochemic research and of valuable references, thus covering the subject-matter in a most thorough manner.

The series, taken as a whole, must be regarded as a well-planned compilation of the latest and best work in biologic chemistry covering the whole field and a reference book in this branch of chemistry which has no equal. While the handbook can not be recommended as a text for general reading, as a comprehensive and up-to-date work of reference it should be assured a place in the libraries of those interested in the subject.

REPORT OF AN INVESTIGATION OF WATER AND SEWAGE PURIFICATION PLANTS IN OHIO. Made Under Authority of an Act of Legislature, Passed Feb. 23, 1906. 1906-1907. Cloth. Pp. 888. Columbus: F. J. Heer, State Printer, 1908.

This volume comprises one of the most important contributions made to sanitary practice by American engineers. Unlike the classic studies on water and sewage purification conducted by the Massachusetts State Board of Health, it deals not so much with specially devised experiments as with the problems arising in the operation of existing water filtration plants and sewage disposal systems. The book has the merits and the defects of such a treatment. While it lacks of coherence and orderly arrangement, it possesses the advantage of giving a comprehensive survey of the whole field and an epitome of the present state of the best practice and opinion in a commonwealth that ranks as one of the foremost in sanitary matters. In its conception and in the main in its execution the report may serve as a model for other states.

Only one special point may be mentioned here, although we may have occasion to refer to some other features of this report later; this is the great stress laid on the necessity of providing expert management and control for both large and small plants. "Ignorance and carelessness in operation, and even absolute neglect . . . are responsible for most of the failures." No matter how thorough and long-continued the preliminary experimentation, if the completed plant is left to the mercy of an inexperienced and untrained engineer the results are sure to be unfortunate. The United States is slowly and painfully learning that energy and goodwill can not take the place of capacity and training. This Ohio report contains many suggestions for sanitarians and health authorities; the large amount of assistance and guidance that a thoroughly informed state board of health can render to grouping local officials is certainly not one of the least valuable.

A FIRST STUDY OF THE INHERITANCE OF VISION AND OF THE RELATIVE INFLUENCE OF HEREDITY AND ENVIRONMENT ON SIGHT. Eugenics Laboratory Memoirs V. By Amy Barrington, of the Galton Eugenics Laboratory, and Karl Pearson, F.R.S. Paper. Pp. 61. Price, 4 shillings. London: Dulau & Co., 37 Soho Sq. W., 1909.

The work of Miss Barrington and Mr. Pearson is conducted in accordance with well-established principles of statistical investigation, and serves to exhibit the marked influence of heredity as compared with a minor action of environment in determining defects of vision. Doubt is thrown on the theory that school work produces myopia and it is suggested that the increasing number of myopics shown in the higher classes is evidence of a law of growth and selection and not due to environment. The necessity of more careful statistical work, dealing with larger numbers of pupils and covering all classes without selection, is emphasized, but the authors are of opinion that the results of their work show a preponderating influence of the hereditary factor.

PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANIMAL PARASITOLOGY. By E. R. Stitt, A. B., Ph.G., M.D., Surgeon, U. S. Navy. Cloth. Pp. 294, with illustrations. Price, $1.50. Philadelphia: P. Blakiston's Son & Co., 1909.

This little book is concerned chiefly with methods, outlining briefly the interpretations from these methods. By far the larger part of the book is given over to bacteriology, including keys for identification of organisms, methods in immunity, such as hemolysis, etc., and the clinical bacteriology of the eye, mouth, nose, feces, etc. The discussions of animal parasites and of molds are especially commendable. The two chapters on blood work are brief. On the whole the book is satisfactory.

FUN IN A DOCTOR'S LIFE. By Shobal Vail Clevenger, M.D. Cloth. Pp. 291. Price, $1.00. Atlantic City, N. J.: Evolution Publishing Co., 1909.

Dr. Clevenger has supplied us with a rather disconnected autobiography in this work, and it would seem that he had plenty of material, since he has had an adventurous life. Born in Italy, his boyhood spent in St. Louis, Cincinnati and New Orleans, in his later life he was an Indian trader on the plains, a soldier in the Civil War, a newspaper editor, a magistrate, a telegraph operator, a government surveyor, a steamboat man, a signal service observer, a printer, then a medical student, an asylum official and superintendent, and a neurologic specialist. This variety of occupation, the details of which are scattered discursively through the book, has certainly given a spice to life in his special case. His experiences with politicians in asylums are vividly told. In some instances he fails to do justice to one or two worthy members of our pro-

fession, but no more, we regret to say, than he does to himself in one or two places in his book. In fact, we should say that it is here and there somewhat inconsiderately written. There is considerable basis of truth, however, in what Dr. Clevenger says concerning the political management of insane hospitals.

GUIDE TO THE CLINICAL EXAMINATION AND TREATMENT OF SICK CHILDREN. Ed. 2. By John Thomson, M.D., Fellow of the Royal College of Physicians of Edinburgh. Cloth. Pp. 629, with illustrations. Price, $3.75. Chicago: W. T. Keener & Co.

This little volume commends itself to the reader as a practical and useful one. It approaches the subject rather from a clinical than a purely didactic standpoint and in many ways supplements the standard text-books, while in no way intended to supplant them. Thus Dr. Thomson devotes 13 pages to pyloric stenosis, and nearly 40 pages to mental defects, while infant-feeding is dismissed with about 30 pages. This tendency is further seen, and advantageously, in the many excellent and original illustrations, notably of pyloric stenosis, meningitis, chloroma, and of that interesting and, in this country, rare lesion, rheumatic nodules. The book distinctly reflects the ideas, methods and interests of one of the great English teachers of clinical pediatrics, and should find a welcome among us.

Marriages

ELAM T. MURPHY, M.D., to Miss Mabel Mary Brassil, both of Chicago, April 26.

WILLIAM ESLEN HAUK, M.D., to Miss Mabel Botkin, both of Duquesne, Pa., April 21.

J. A. MCCOY, M.D., to Miss Pauline E. Simmons, both of Picayune, Miss., April 12.

GEORGE A. CAMERON, M.D., to Mrs. Henry R. Moore, both of Philadelphia, April 21.

HAROLD EDWIN HOLBROOK, M.D., to Miss Enid Elizabeth Scott, both of Milwaukee, April 14.

JOHN P. TURNER, M.D., Philadelphia, to Miss Mary C. Harris of Washington, D. C., April 15.

FRANK E. THOMAS, M.D., Mason, Mich., to Miss Ada Lyon of Bowbells, N. D., at Chicago, April 20.

LAWRENCE HENRY HILL, M.D., Greenway, Ark., to Miss Celia Blair Keller of Centralia, Ill., April 21.

JOHN C. KIRBY, M.D., to Miss Bertha McNeeley, both of Cedar Vale, Kan., at Winfield, Kan., April 19.

LLOYD W. STEPHENSON, M.D., Washington, D. C., to Miss Mary Virginia Haswell, at Baltimore, April 20.

ROSSLYN PHILLIP HARRIS, M.D., Athens, N. Y., to Miss Susan Marion McKenna of Rhinebeck, N. Y., April 21.

Deaths

Ezra Mitchell, M.D. Dartmouth Medical School, Hanover, N. H., 1867; a member of the American Medical Association; and one of the best known practitioners of northern New Hampshire; a medical cadet with the Eighth Maine Volunteer Infantry during the Civil War; at one time president of the New Hampshire Medical Society; from 1882 to 1885 surgeon general of the state; a member of the legislature; a constant advocate of the state tuberculosis sanatorium which he lived to see constructed at Glencliff; president of the Lancaster Savings Bank and Lancaster Trust Company; died at his home in that city, April 20, aged 67.

John William Caughlin, M.D. Trinity Medical College, Toronto, Ont., 1879; a member of the American Medical Association; at one time president of the Bay County, Mich., Medical Society; a member of the staff of Mercy Hospital, Bay City; for ten years a member and eight years president of the local board of health; a member of the local board of pension examining surgeons, and for four years its president; died at his home April 20, from nephritis, aged 53.

Henry Erskine Pressly, M.D. University and Bellevue Hospital Medical College, New York City, 1899; of Birmingham, Ala.; a member of the American Medical Association; visiting surgeon to St. Vincent's Hospital and local surgeon for the Louisville and Nashville, and Seaboard Air Line railroads; died in Johns Hopkins Hospital, Baltimore, April 23, aged 34.

Hugo A. Auler, M.D. Washington University, St. Louis, 1890; of St. Louis; a member of the Missouri State Medical Association; consulting physician to St. Louis City Hospital; physician to Mount St. Anne's Consumption Hospital and Mount St. Rose's Hospital; died in Elgin, Texas, April 20, from heart disease, aged 41.

Michael P. Reynolds, M.D. St. Louis University School of Medicine, 1901; a member of the American Medical Association; formerly a member of the medical staff of St. Francis Hospital, Colorado Springs; and secretary of El Paso County Medical Society; died at his home in St. Louis, April 17, from pneumonia, aged 42.

Charles Richard Moxley, M.D. Queen's University, Kingston, Ont., 1905; of North Bay, Ont.; a member of the Ontario Medical Council; died in the Royal Victoria Hospital, Montreal, March 20, from appendicitis and pelvic peritonitis, with intestinal obstruction, for which several operations had been performed, aged 26.

Allen Sidney Whetstone, M.D. University of Michigan, Ann Arbor, 1880; formerly professor of operative surgery and preventive medicine in the Minneapolis College of Physicians and Surgeons; a veteran of the Civil War, and surgeon to George N. Morgan Post, G. A. R.; died at his home in Minneapolis, April 19.

Hugh A. Maughlin, M.D. University of Maryland, Baltimore, 1864; assistant surgeon of the Sixth Maryland Volunteer Infantry during the Civil War; for four terms adjutant general of the department of Maryland, G. A. R.; since 1877 an inspector of customs in Baltimore; died at his home from pleurisy, April 17.

John Hutchins Gaines, M.D. Tulane University, New Orleans, 1853; a charter member of the Garland County-Hot Springs (Ark.) Medical Society; died at his home in that city, April 19, aged 77. At a special meeting of the medical society, April 21, resolutions of regret and sympathy were unanimously adopted.

Alfred Quin Donovan, M.D. Bellevue Hospital Medical College, New York City, 1882; of Elizabeth, N. J.; a member of the American Medical Association; attending surgeon and chief of staff to Alexian Brothers' Hospital, Elizabeth; died in that institution, April 26, after operation for cancer of the liver, aged 52.

Willoughby Hector Gunn, M.D. American Eclectic Medical College, Cincinnati, 1880; died at his home in Oklahoma City, Okla., from the effects of morphin believed to have been self-administered with suicidal intent, while despondent on account of cancer of the throat, aged 59.

Alexander Miller Campbell, M.D. Western Reserve University, Cleveland, 1880; a veteran of the Civil War; a member of the Seneca county, Ohio, board of pension examining surgeons; died suddenly from cerebral hemorrhage, at his home in Tiffin, April 22, aged 62.

John W. Berry, M.D. College of Physicians and Surgeons, Baltimore, 1884; a member of the West Virginia State Medical Association; died at his home in Flatwood, April 21, from poisoning by carbolic acid taken in mistake for aromatic spirits of ammonia, aged 45.

Willis Alston, M.D. University of Maryland, Baltimore, 1869; a member of the Medical Society of the State of North Carolina, and one of its founders; for six years a member of the State Board of Medical Examiners; died at his home in Littleton, April 20, aged 62.

William P. Via, M.D. Washington University, St. Louis, 1872; for more than twenty years a practitioner of Oregon, and once coroner of Washington county; a Confederate veteran; died at his home in Forest Grove, April 17, aged 66.

John E. W. Sanderson, M.D. College of Physicians and Surgeons, New York City, 1886; visiting neurologist to St. Mary's and the Eastern District hospitals, Brooklyn; died at his home in New York City, April 19, from heart disease, aged 49.

Charles William Littleton, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1866; for four years treasurer and later commissioner of Labette county, Kan.; died at his home in Oswego, March 29, 1908, from bronchitis, aged 76.

Thomas Houston Garvin, M.D. University of Louisville (Ky.) 1875; a member of the Kentucky State Medical Association, and a Confederate veteran; died at his home in Horse Cave, April 20, from heart disease, aged 67.

Edwin W. Pugh, M.D. Vanderbilt University, Nashville, 1893; a member of the Florida Medical Association; and president of the Dade County Medical Association; died at his home in Miami, April 18, from tetanus, aged 42.

Zachariah Pleasant Glass, for fifty-eight years a practitioner; formerly proprietor of Elmwood Park Sanitarium, Hannibal, Mo.; died at his home in San Bernardino, Cal., from senile debility, March 16, aged 88.

George Augustus Ingram (license, Luzerne county, Pa.); for thirty-nine years a practitioner of Summit Hill and Lansford; died in Bryn Mawr, Wales, Dec. 1, 1909, from cerebral hemorrhage, aged 71.

Theodore Parker Crosse, M.D. Rush Medical College, Chicago, 1879; a member of the State Medical Society of Wisconsin; died at his home in Sun Prairie, April 20, from erysipelas, aged 53.

John Kilgour White, M.D. University of Maryland, Baltimore, 1884; of Woodland, Md.; died suddenly from pneumonia, while making a professional call, April 4, aged 48.

Eli Gilmore McDivitt, M.D. Miami Medical College, Cincinnati, 1873; of Richmond, Ind.; died in the Reid Memorial Hospital in that city, April 18, from senile dementia, aged 62.

Minnora Sprague Marshall, M.D. University of Michigan, Ann Arbor, 1896; formerly of Montpelier, Va.; of Fruitvalle, San Francisco; died at her home April 10, from cancer, aged 39.

James Robie, M.D. Vermont Medical College, Woodstock, 1853; a pioneer practitioner of Black River Falls, Wis.; died at his home in that city from heart disease, April 21, aged 82.

William Vincent Shaffer, M.D. Miami Medical College, Cincinnati, 1880; formerly of Middletown, Ohio; died in the German Hospital, Newark, N. J., April 21, from pneumonia, aged 55.

Josephus Davis, M.D. Western Reserve University, Cleveland, 1860; at one time mayor of New Carlisle, Ind.; died at his home in that place, April 18, from pneumonia, aged 74.

Daniel Futrell (license, Ky., years of practice); a practitioner of Kentucky for more than fifty years; died at his home in Melber, February 26, from heart disease, aged 83.

Robinson John Cotton (license, Tenn., 1889); of Memphis; a Confederate veteran; died in Memphis, Nov. 24, 1908, after an operation for the removal of gallstones, aged about 62.

John T. Bethel, M.D. Kentucky School of Medicine, Louisville, 1870; a member of the American Medical Association; died at his home in Henderson, Ky., April 23, aged 70.

William Abel Lytle, M.D. University of Tennessee, Nashville, 1902; of Oklahoma City, Okla.; died at his former home in Eagleville, Tenn., April 12, from tuberculosis, aged 36.

William H. Shaffer, M.D. Starling Medical College, Columbus, Ohio, 1881; formerly of Columbus; died in Elkhart, Ind., April 4, from tuberculosis of the kidney, aged 65.

David Dunlap Oates, M.D. University of Pennsylvania, Philadelphia, 1860; of Merkel, Ala.; died suddenly in Birmingham, Ala.; April 23, from heart disease, aged 74.

Andrew J. B. Jenner, M.D. London, England, 1859; afterward a clergyman and bishop of the Anglican Church; died at his home in Detroit, Mich., April 15, aged 72.

Julius M. Gilbert, M.D. Georgia College of Eclectic Medicine and Surgery, Atlanta, 1882; died at his home in Danville, Ga., April 7, from general debility, aged 62.

Jesse McCoy (license, Iowa, 1886); a member of the Iowa State Medical Society; died at his home in Fort Madison, April 16, from heart disease, aged 72.

Cooper Fenimore McBride, M.D. University of Pennsylvania, Philadelphia, 1875; died at his home in Youngstown, Ohio, from pneumonia, April 13, aged 58.

Frank Levasseur, M.D. University of the Victoria College, Coburg, Ont., 1886 died at his home in Haverstraw, N. Y., March 29, from uremia, aged 47.

James P. Bone, M.D. Kentucky School of Medicine, Louisville, 1859; a Confederate veteran; died at his home in Arlington, Tenn., April 11, aged 77.

Lambert Laurens, M.D. Iowa Medical College, Keokuk; of Le Sueur county, Minn.; was burned to death March 21, near Montgomery, Minn., aged 60.

Edward J. Dickinson, M.D. Albany (N. Y.) Medical College, 1866; died suddenly at his home in Corydon, Iowa, April 19, from heart disease, aged 70.

Thomas S. Potter, M.D. Medical College of Ohio, Cincinnati, 1869; died at his home in Carthage, Cincinnati, April 20, from pneumonia, aged 75.

James M. Chadwick, M.D. Vanderbilt University, Nashville, 1890; died suddenly, April 19, at his home in Murfreesboro, Tenn., from heart disease.

Henry Bascon Burkett, M.D. College of Physicians and Surgeons, Baltimore 1878; of Hillsboro, Ala.; died in Birmingham, Ala., April 23.

Robert J. Jordan, M.D. Eclectic Medical College of the City of New York, 1881; died at his home in Philadelphia, April 18, aged 79.

Casimir A. Landrum, M.D. Tulane University, New Orleans, 1876; died at his home in DeFuniak Springs, Fla., April 23, aged 70.

Henry King McLean, M.D. Albany (N. Y.) Medical College, 1850; died at his home in Hoosick Falls, N. Y., April 7, aged 84.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 8-11.

American Academy of Medicine, Atlantic City, June 5-7.
Am. Assn. of Genito-Urinary Surgeons, Pocona, Pa., May 31-June 1.
Am. Climatological Association, Fortress Monroe, Va., June 4-5.
American Confederation of Reciprocating, Examining and Licensing Medical Boards, Louisville, May 12.
American Dermatological Association, Philadelphia, June 3-5.
Am. Gastro-Enterological Association, Atlantic City, June 7-8.
American Gynecological Society, New York, May 27-29.
American Laryngological Association, Boston, May 31-June 2.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 3-5.
American Medico-Psychological Assoc., Atlantic City, June 1-4.
American Neurological Association, New York, May 27-29.
American Orthopedic Association, Hartford, Conn., June 14-16.
American Pediatric Society, Lenox, Mass., May 27-28.
American Proctologic Society, Atlantic City, June 7-8.
American Surgical Association, Philadelphia, June 1-3.
American Therapeutic Society, New Haven, Conn., May 6-8.
American Urological Association, Atlantic City, June 7.
Arizona, Medical Association of, Prescott, May 19-20.
Arkansas, Medical Society of, Pine Bluff, May 18-21.
Association of American Physicians, Washington, D. C., May 11-12.
Con. of State and Prov. Bds. of No. Am., Washington, June 4-5.
Connecticut State Medical Society, Hartford, May 26-27.
Illinois State Medical Society, Quincy, May 18-20.
Iowa State Medical Society, Dubuque, May 19-21.
Kansas State Medical Society, Emporia, May 5-7.
Louisiana State Medical Society, New Orleans May 4-6.
Maine Medical Association, Portland, June 16-17.
Maryland, Med. and Chir. Faculty of, Baltimore, May 13-15.
Massachusetts Medical Society, Boston, June 15-16.
Missouri State Medical Association, Jefferson City, May 18-20.
Montana State Medical Association, Missoula, May 12-13.
Nat. Assn. for Study and Prevention of Tuberculosis, Washington, D. C., May 13-15.
Natl. Con. State Med. Ex. and Licensing Bds., Atlantic City, June 7.
New Hampshire Medical Society, Concord, May 13-14.
New Jersey Medical Society, Cape May, June 23-25.
North Dakota State Medical Association, Fargo, May 11-12.
Rhode Island Medical Society, Providence, June 4.
Texas State Medical Association, Galveston, May 11-13.
Wisconsin State Medical Society, Madison, June 30-July 2.

AMERICAN GYNECOLOGICAL SOCIETY

Thirty-fourth Annual Meeting, Celebrating the Centennial of McDowell's Operation, held in New York City, April 20-22, 1909

The President, DR. J. RIDDLE GOFFE, in the Chair.

An address of welcome was delivered by Dr. Clement Cleveland, New York, and was responded to by Dr. J. Montgomery Baldy, Philadelphia.

SYMPOSIUM ON CESAREAN SECTION: INDICATIONS IN PLACENTA PRÆVIA, AND THE JUSTIFIABILITY OF STERILIZATION IN THIS CONDITION

Cesarean Section in Placenta Prævia

DR. CHARLES JEWETT, Brooklyn, N. Y.: The essential consideration in weighing the claims of Cesarean section as against obstetric measures in placenta prævia are blood loss, shock of operation and life-saving possibilities to the child. The lessened risk of infection and of uterine lacerations have some force, but the question of sepsis scarcely disturbs the balance.

and lacerations are largely the result of avoidable violence. Accidents of obstetric manipulations in the matter both of infection and of uterine injuries, while not wholly preventable, belong more to past than to present day methods. Subsidiary questions which must be considered are existing anemia and exhaustion, the extent of implantation, the stage of dilatation, and the dilatability of the cervix, the viability of the child. While in certain cases eclampsia, pelvic contraction or narrow vagina may determine the choice, here the indication is concerned with the complication more than the faulty placental insertion. Our present concern is with placenta prævia as of itself an indication for the Cesarean operation. In complete placenta prævia, and when complicated with an undilated and rigid cervix, abdominal section claims consideration. Certain of the more conservative sectionists accord a place to the Cesarean operation in these conditions when it can be performed in a hospital. But the benefits of a hospital environment obtain in a similar measure for obstetric delivery. Even in complete previal implantation, and with undilated cervix, bleeding is amenable to one or more of the usual obstetric procedures, gauze tamponnade or water bag, within the cervix, or the latter passed through the placenta, podalic version. Grave hemorrhage in placenta prævia is due more to failure in the timely and well directed use of the obstetric measures at our command than to any lack of them. With ligation of the uterine arteries, as proposed by Miller of Pittsburg, I have had no experience in vicious implantation of the placenta. We know its value in certain other uterine hemorrhages, and, if its author's claims are borne out by further trial, nothing more is required for the management of the kind of hemorrhage under discussion. From the standpoint of shock, the major operation is at a signal disadvantage. The abnormal implantation is seldom or never recognized until bleeding has begun. Abdominal section is a grave risk after much hemorrhage. In a greatly depleted patient it is almost certainly fatal. Cesarean section, once begun, must be carried to completion, whatever the condition of the woman. It admits of no waiting for recuperation. On the other hand, no shock attaches to the introduction of a hydrostatic bag, and little or none to a Braxton-Hicks version. The obstetric procedure may be moderated to suit the needs of the individual case. Bleeding controlled, time is permitted for returning strength and a slow and gradual dilatation and delivery entail a minimum of tax. In a considerable proportion of cases expulsion or extraction is made easier by immature fetal development. In nearly 25 per cent. the child is non-viable, and here often extraction may be simplified by craniotomy. As between a skilful section and an equally skilful obstetric delivery, less shock should obtain in the latter.

The principal claim for Cesarean section in placenta prævia is its diminished fetal mortality. Under obstetric treatment the death rate of the child is formidable. For this, three causes are responsible—prematurity, the effect of maternal blood loss, and the delay and traumatism incident to delivery by the natural passages. In practically all cases the resistance of the fetus is in greater or less degree impaired by maternal hemorrhage. A large proportion of the children are doomed to death, whatever the method of delivery. Of the possibly viable children, Cesarean section may save many lives, but by no means all. Vaginal Cesarean section has no greater claim to consideration than the suprasymphyseal operation. While it may offer quite as good a prognosis for the mother, the chances for the child are not as good, owing to the somewhat greater fetal risks in extraction through the natural passages. Not only do we find little rational basis for Cesarean section in placenta prævia, but its claims receive scant support from experience. In 2,010 cases of placenta prævia from the German, French and Italian literature of the last two years, the maternal mortality under obstetric methods of delivery was 221, 10.9 per cent., the fetal 1,159, 57.3 per cent.; 726 of these cases, reported by Füth, were collected from the practice of midwives and general practitioners. Many patients were subjected to prolonged tamponnade and were examined by needless hemorrhage. Exclusive of Füth's cases the maternal mortality was 6 + per cent., and the fetal 68.8 per cent. Comparing these results with those of 95 abdominal Cesarean operations collected from seven publications, all but one of the last year, we find in the latter a mortality of 11.5 per cent. for the mothers, and 34 per cent. for the children. Sellheim, in one vaginal Cesarean section, saved both mother and child. In twelve uterovaginal sections reported by Bumm the maternal deaths were 8.3 per cent., and the fetal 83.3 per cent. Hammerschlag refers to twenty-six vaginal Cesarean sections, with a fetal dath rate of 55 per cent. How many mothers were lost he fails to say. The few vaginal operations make a better showing for the mothers than the abdominal, but the percentage of fetal deaths is no less tnan under obstetric methods. If conclusions may be formulated on so small a number of cases, the "Cesareanists" have not yet established their cause.

The Indications for Abdominal Cesarean Section in Placenta Prævia

DR. HENRY D. FRY, Washington, D. C.: The principal dangers to be overcome by the obstetric treatment of placenta prævia are hemorrhage, laceration of the uterus and sepsis. Delivery from above escapes these dangers to a great extent, because removal of the infant and placenta by a Cesarean section does away entirely with the first and second stages of labor. Abdominal Cesarean section, however, brings dangers of its own; shock, sepsis, acute dilatation of the stomach, and other postoperative complications. The indications for the classical Cesarean section are primiparity, small vagina, rigid and undilatable cervix, and placenta prævia centralis. This combination will be encountered in about 5 per cent. of all cases of placenta prævia; therefore, the purely obstetric management will best meet the indications of 95 per cent. of cases. The indications for Porro-Cesarean section include those women who have been subjected to preliminary obstetric interference, plus the classical Cesarean indications mentioned.

The Advisability of Cesarean Section in the Treatment of Complete Placenta Prævia

DR. FRANCIS S. NEWELL, Boston: The advocates of Cesarean section claim that the maternal mortality under the ordinary methods of treatment is so great that some change must be made. Hirst states that in the hands of the general practitioner a mortality of approximately 40 per cent. is present in complete placenta prævia, but believes that in the hands of experts the ordinary mortality should be in the neighborhood of 1 per cent., or, in other words, an accidental mortality. Other authorities admit a mortality varying from 3 to 6 per cent. in a large series of cases, presumably under the care of experts. The maternal mortality from abdominal Cesarean section for placenta prævia is variously given as from 20 per cent. upwards even in expert hands, and it seems probable that if abdominal Cesarean section is adopted as the routine treatment by the profession as a whole, a constant high mortality will be maintained, since the results of surgery performed by the general practitioner are always worse than those obtained by competent abdominal surgeons. While the maternal mortality in the hands of an expert averages from 3 to 5 per cent., in the hands of the general practitioner the mortality is 40 per cent. The fetal mortality in cases of complete placenta prævia varies from 60 to 65 per cent. under the ordinary methods of treatment, and it would seem at first sight that this was the indication for the performance of Cesarean section. However, any one who studies carefully the causes of the fetal death rate, must be impressed with the fact that no such improvement in statistics is to be expected as would seem probable at first sight. If there is any factor which claims recognition in determining the advisability of substituting Cesarean section for the ordinary methods of treatment of placenta prævia, it would seem that the morbidity attendant on dilatation and extraction is the one. There can be no doubt but that the trained surgeon, who has had no obstetric training, will have better results in treating placenta prævia by Cesarean section than if he tried to perform an operation with which he has had little or no experience. The advocates of Cesarean section have not recognized that their personal limitations furnish the great indication for an abdominal delivery,

and not the exigencies of the case. Recently vaginal Cesarean section has been urged as the best solution of the problem, and the advocates of this operation claim that it is simple and easy for the trained surgeon and carries much less risk with it than the abdominal delivery, but my feeling, based on a limited experience with the operation, is that it is not so simple a procedure, even in uncomplicated cases, as is commonly stated, and I feel that, although in the rare cases in which the cervix is more or less rigid, it is probably a safer operation than abdominal delivery, as a routine procedure, in complete placenta prævia it has few, if any, advantages over the methods heretofore in use.

Cesarean Section in Placenta Prævia

DR. EGBERT H. GRANDIN, New York: Except when the patient may be kept under constant observation, the rule should be to empty the uterus as soon as the diagnosis is made, rarely, therefore, will the question of Cesarean section offer. Less radical means will suffice from the standpoint of the woman, and in marginal instances for the child. In central implantation near or at term the child may be disregarded, and unless the cervix be diseased, undilatable and not incisable, the question of Cesarean section will not offer. When time permits, if the vaginal portion has merged, dilating measures suffice associated with the Dührssen operation. In marginal instances, the vaginal Cesarean section may enter into consideration.

Sterilization in Cesarean Section

DR. JOHN OSBORNE POLAK, Brooklyn, N. Y.: I feel that the obstetric surgeon should sterilize the woman who is subjected to a Cesarean section, first, if she request the procedure; second, after the second section in the presence of the absolute indication, if the proper consent can be obtained; third if the pathologic conditions present necessitate extirpation of the uterus in the interests of the patient's life and health, sterilization may be done, if necessary, without consent. In elective and uncomplicated hysterotomies, excision of the proximal ends of the Fallopian tubes at their origin in the uterus and occlusion of the severed end by flattening it out and suturing it to the peritoneum on the posterior fundal wall is the operation of choice. When infection, disease or atony with uncontrollable hemorrhage of the uterus is present, hysterectomy or the Porro operation should be elected, to secure to the patient immunity from future conception and gestation. Finally, whenever possible, one or both ovaries should be retained in order that an operative menopause may be averted.

The Justifiability of Sterilizing a Woman After Cesarean Section, with a View to Preventing Subsequent Pregnancies

DR. CHARLES M. GREEN, Boston: It is ethically and morally unjustifiable to sterilize a woman in performing Cesarean section, even if she and her husband request it. The burden of proof to the contrary rests with those who advocate it. Opportunity may properly be taken, in performing Cesarean section, to remove pathologic organs; and the result may be that the woman can never again become pregnant, as in bilateral salpingo-oöphorectomy, or in hysterectomy for neoplasms. But in the presence of disease requiring total ablation of the pelvic generative organs, pregnancy could not again occur were the organs not removed. If the indication for Cesarean section is absolute, and husband and wife are so informed, they may abstain from subsequent pregnancies. If the indication is relative, and the disproportion of minor degree, the woman subsequently may be safely delivered of living children; she may deliver herself. In either case, experience teaches that repeated section may be performed as safely as the primary operation. A husband and wife may not ethically ask that either be sterilized with a view to preventing pregnancy and avoiding repeated section. If such a request is made and acceded to, not only is the operation morally wrong, but in the event of a second marriage may be bitterly regretted. I furnish statistics in support of these opinions.

Discussion on Cesarean Section

DR. ALBERT F. A. KING, Washington, D. C.: In discussing this subject, we must bear in mind that obstetrical patients must be divided into two classes, those who can be treated in hospitals with surgical aid and those who are treated in their homes without surgical aid, as, for instance, women in the country. In considering any method of treatment, those two classes must be borne in mind.

DR. HERBERT SPENCER, London, England: I have had little experience with abdominal Cesarean section or vaginal Cesarean section in the treatment of placenta prævia. My own treatment has been usually Braxton-Hicks version, and leaving the case to Nature, delivery usually being effected in this way without any further hemorrhage in the course of about three hours, on an average, but this method results in a high fetal mortality. We must consider whether we are going to take into account the mother or the child, or both. The use of the Champetier de Ribes bag is exceedingly valuable, and while I have not had much experience with it myself, my colleague has had, and says that it reduces the mortality of the children considerably, with some increased mortality among the mothers. If Cesarean section is indicated, the abdominal is perferable to the vaginal route.

PROFESSOR HOFMEIER, Würzburg, Germany: In my opinion, the treatment of placenta prævia by abdominal section is limited to a small percentage of cases, because it is practically impossible for the general practitioner to follow out this method of treatment. The old method of combined version and extraction, generally accepted in Germany, and treatment by means of metreurynters in case of large and strong children has given good results.

DR. E. W. CUSHING, Boston: I do not think that any one has a right to determine whether a woman shall be sterilized or not. A woman's body belongs to herself. If she has been malformed by Nature and can not be delivered of a child without repeated surgical operations which involve the risk of life, and she desires to avoid that subsequent risk by having a sterilizing operation done, she has a right to do so.

DR. HENRY D. FRY, Washington, D.C.: My rule is to explain the situation to the woman and her husband and allow them to decide whether or not she shall be sterilized. I do not believe we can make a dividing line, on account of the social position of the woman.

PROFESSOR HOFMEIER: I have performed sterilization not only with the consent of the woman and her husband, but at their urgent request. I do not think it is possible for women to abstain from subsequent pregnancy, as indicated by Dr. Green.

DR. CHARLES JEWETT, Brooklyn: I performed Cesarean section two months ago on a woman on whom I did the same operation two years previously, and at the request of both the husband and wife I felt justified in doing an operation of this character. I resected the tubes from the cornu of the uterus, then simply caught the end of the tube down on the suture line.

DR. HERBERT SPENCER, London: I do not consider we are justified in saying, in the absence of pathologic conditions, such as fibroid tumors, cancer or infection, that a woman shall not have any more children. From a purely ethical standpoint, I can not see any difference between consenting to operate on a woman and preventing her from having children by this sterilization operation and committing an abortion because she asks it. The so-called sterilizing operation is not always reliable. A distinguished abdominal surgeon in England supposedly sterilized a woman, but subsequently, much to her annoyance and mortification, she again became pregnant, and I delivered her of a child. I delivered this woman for the seventh time after so-called sterilization.

DR. J. MONTGOMERY BALDY, Philadelphia: Nature has so arranged matters that some women, apparently healthy, will not bear children. Pathologic processes set in which render them incapable of bearing children. A woman is not in this world to be a beast of burden, although she has reproductive duties to perform, and there comes a time when, after she has performed those to the best of her ability, Nature has so deformed her, perhaps maimed her, that she no longer can be delivered of a child without a surgical operation, and for the sake of her health, comfort and happiness, she is the best

arbiter as to whether sterilization shall be done or not. My sympathies go out largely to women in this respect. If a woman, guided by the conscientious judgment of the physician, decides to be sterilized, we have a right to sterilize her and prevent reproduction in the future in this individual case, but this does not mean that this operation should be done on every woman who requests it.

DR. ANDREW F. CURRIER, New York: I place myself on the side of those who believe that it is an injustice to a woman, aside from any desire she may have for children, to subject her repeatedly to an operation which risks her life. The desire for offspring is a natural and proper one in most cases. The mere physical conditions alone which result, or are likely to result, should be a strong argument and should influence us materially in regard to the question of future pregnancy.

DR. SETH C. GORDON, Portland, Me.: A woman has a right to say whether she shall be sterilized or not. Oftentimes a woman will say, "Doctor, I don't want a child." But when she is subjected repeatedly to an operation which we know to be dangerous to life, in order to be delivered of a child, she certainly has a right to say whether or not sterilization shall be performed.

DR. C. C. FREDERICK, Buffalo: I have sterilized women at their request and at that of their husbands in cases in which Cesarean section had been done for the absolute indication, with narrowing of the pelvis to a degree that it was absolutely impossible to deliver a viable child through the pelvis.

DR. ALBERT F. A. KING: Self-preservation is the first law of nature, and preservation of the species is the second law. I agree with those who have expressed the opinion that women and their husbands have a right to decide this question of sterilization.

DR. J. WESLEY BOVEE, Washington, D.C.: I concur in the view that the husband and wife should decide whether the woman is to become pregnant or to be sterilized, but the surgeon has not the right to act as he chooses to produce sterility. The decision of the question rests largely with the husband and wife, and not with the surgeon. The surgeon has no right to remove a woman's possibility of future pregnancy except for grave pathologic lesions in the organs of generation themselves.

The subject was further discussed by Drs. George Gellhorn, Willis E. Ford, Egbert H. Grandin, Philander A. Harris, and the discussion was closed by the various essayists.

What Shall We Teach the General Practitioner Concerning the Treatment of Abortion?

DR. FREDERICK J. TAUSSIG, St. Louis, Mo.: The curette is still popular with the general practitioner because it requires less technical skill for its use. The summarized experiences of many large clinics show that no one method of treatment is available for all cases, but that each has its special field of usefulness. An attempt to construct a simple table of operative procedure varies according to (1) the stage of pregnancy at which abortion occurs (first six weeks, second six weeks, third to fifth month); (2) the stage of the abortion (imminent, inevitable, incomplete); (3) the experience of the physician in charge (country practitioner, city practitioner, specialist); (4) surroundings (country residence, city residence, hospital).

DISCUSSION

DR. JOSEPH TABER JOHNSON, Washington, D. C.: This is an important subject, and as gynecologists as well as obstetricians we have much to do with the effects of badly managed cases of abortion. In Washington as in St. Louis, the dispensary and charity hospital class of patients, who come for diagnosis and treatment, state that they attribute their present ill-health to their last abortion, and by questioning these patients we find their case was badly managed, in the great majority of instances. It would be a good thing if this society could formulate some method of treatment for these cases. As to whether the curette or the finger should be used to scoop out of the uterus the remains of an abortion, I agree with Dr. Taussig that in the first six weeks, when the neck of the uterus is dilated only a little, it would be doing violence to the parts to attempt to dilate to such an extent as to permit the index finger to pass into the uterus and scoop out what remains there. On account of the great damage done by the curette, I should advocate, in the series of cases which he has detailed, after the sixth week, the seventh and eighth weeks, that the woman be anesthetized and the finger introduced into the uterus instead of the curette and the remnants of the after-birth or membrane removed. The finger is a much more intelligent instrument than the curette.

DR. WILLIAM H. WATHEN, Louisville: I have no reliable statistics as to the relative number of surgical operations I do when the pathologic condition has been caused by abortion or gonorrhea, but it is so frequently caused by abortion requiring extirpation of the diseased adnexa, that certainly we should strive to prevent this occurrence. The placenta should always be removed immediately after the delivery of the child, because delay in this regard is dangerous, and we never know when danger is going to come. Not only do practitioners perforate the uterus with a curette, but they never know when they use the curette whether they have removed all the secundines or not. We should never under any circumstances, in my judgment, use the curette to remove retained secundines, but should rely on the educated finger.

DR. THOMAS J. WATKINS, Chicago: I not only follow out the old treatment of the vaginal pack in cases in which the uterus can not be emptied without a great deal of traumatism, but pack the uterine cavity. This should be done in all cases in which the uterus can not be emptied without considerable traumatism, and especially when the cervix is not well dilated. This treatment can be extended even to the cases of infection. Sometimes a woman is sent to the hospital with a temperature of 104-5 F., suffering from criminal abortion—she being possibly two or three months pregnant—with undilated cervix, and we no longer think it necessary to empty the uterus at once, but it is much better for the patient to pack the uterine cavity as full as possible in the form of a vaginal pack. The next morning the temperature is generally normal. During the day the woman may expel the gauze from the uterus, and usually expels the fetus and membranes with it. We leave it in forty-eight hours, as a rule, at the end of which time it has either expelled itself or can be removed with very little traumatism or shock to the patient.

DR. MALCOLM MACLEAN, New York: I want to speak for myself, and possibly a few others, on one phase of this subject. Dr. Wathen has referred to practitioners who are not able to dilate the uterus and empty it by the finger. I am one of those. I can dilate the uterus, but can not empty the horns of the uterus and feel sure that I have removed all débris from this organ. I want to know how a man's finger has become so elongated and prehensile that he can reach the corners of the uterus and safely feel that he has removed all detritus. There are undoubtedly men, such as Dr. Wathen, who can do this. I can not. I believe the mistake is made frequently by good operators who think they have emptied the uterus by the finger, and Nature comes to their salvation and empties the uterus afterward of pieces of placental tissue which otherwise might give trouble.

DR. EUGENE C. GEHRUNG, St. Louis: If we wait three or four hours after the expulsion of the ovum, we will have very great difficulty in inserting the finger, while if it is done immediately it can be effected with great ease. I agree with Dr. MacLean that the finger is too short to reach the fundus of the uterus in some cases, but when the finger is inserted well, if we take care to put the other hand on the fundus of the uterus and press the area over the finger, the little spaces can be cleaned out. That has been my practice and I have succeeded in removing any retained pieces of placenta.

DR. JOSEPH E. JANVRIN, New York: Like Dr. Watkins, I pass a small wad of gauze up into the cervix and tampon the vagina thoroughly to excite contractile pains.

DR. F. TAUSSIG: I presented this paper not as a subject for discussion by us as regards our own technic, but with regard to the technic that we would advise the general practitioner to use, and I think in that respect we must be very

clear and definite in our instructions. The tampon, the curette, the finger, each should be used in certain instances, and we should impress on the general practitioner the exact indications for each of these methods.

Latero-Lateral Anastomoses of Ileum and Sigmoid Flexures for Chronic Mucous Colitis

DR. GEORGE H. NOBLE, Atlanta, presented a preliminary report on 27 cases, in which he had resorted to these operations. Among other things, he said: Results show cures in the majority of cases, considerable improvement in others, and little improvement in a small percentage of them. Mucous discharges were cured in the first series of older cases, and decreased in those recently operated on. Colic and soreness of abdomen have been relieved, or cured in almost all cases. Headaches from intestinal toxemia have also been relieved and the general health of the patients improved to a greater or less extent. The operation does not cure constipation in all cases, but in face of this fact, patients with constipation report either cures or improvement in the mucous colitis. The author pointed out the principles involved, discussed the effect of sulpho-ethers in the urine, and gave a short history of the surgical treatment of chronic colitis. In addition to operation, it is essential to correct complicating lesions which either lead to constipation or interfere with a free outdoor life. It is likewise essential to regulate the diet in order to secure good results in all cases.

DISCUSSION

DR. EGBERT H. GRANDIN, New York: A simpler method sometimes answers for the cure of mucous colitis than anastomosis of the ileum and sigmoid flexure, and that is the removal of the appendix. Since it has become my custom to take the appendix out, as a routine measure, whenever in the course of an abdominal section for other lesions the condition of the patient allows the extra few minutes, I have noticed frequently that mucous colitis has disappeared. I have done that empirically with the full consent of the patients, with a knowledge that the operation was empirical, and I have deliberately taken out the appendix for the cure of mucous colitis in one case, the patient having been an invalid from that trouble twelve years before I removed the appendix. The appendix was postcecal, and slightly adherent, but not an appendix requiring an operation for appendicitis.

DR. LEWIS S. MCMURTRY, Louisville: Since a large number of our men have been in the Philippines and contracted amebic dysentery, this subject has received more consideration and has developed the rather surprising fact that so far north as Cincinati amebic dysentery is indigenous. I have had the opportunity to give some attention to this subject, and have been surprised at the number of cases of amebic ulceration of the colon that have been discovered in people who have never been out of this country, nor even in any tropical climate. They have been treated for years in various ways, but they would not come under the class of cases discussed by Dr. Noble with a view to surgical treatment in the manner he has indicated. By position, inverting the patient, and using an instrument which will allow the colon to be examined and illuminated a good distance, the characteristic ulceration of this form of lesion of the intestine will be discovered, and it is almost incurable by enemata and by systemic treatment. It goes on for years with a diarrhea, with wasting of the patient, and there has been no operation that has been more useful in the treatment of this class of diseases than that of appendicostomy. In the hand of colleagues I have seen perhaps half a dozen patients who have been treated in this way in the last year. The scrapings from these ulcers, when examined, are found to be literally alive with amebas. I would suggest this as one of the possibilities in all the cases that have been described by the essayist, and I would further suggest that in these cases the parts should be illuminated carefully and examined before resorting to the operation that has been described.

DR. FRANKLIN H. MARTIN, Chicago: If the author had read all of his paper, undoubtedly there would be observed a similarity between the operation he has described and the one suggested by Arbuthnot Lane, namely, the removal of the colon for the treatment of constipation. This operation provides a remedy for that part of the colon which is dead, leaving a portion of the colon unused by the Arbuthnot Lane operation. I would be glad to hear what Dr. Noble has to say in reference to the Lane operation.

DR. J. RIDDLE GOFFE, New York: In regard to the presence of amebic dysentery below the Ohio River as having been discovered in the last few years, I have heard this explanation, that it has been brought back by our soldiers from the Philippines and may have become indigenous at the present time from that cause.

DR. G. H. NOBLE: I avoided purposely saying anything about amebic dysentery and similar conditions because the treatment is so well known, and so many operations have been done for their relief. In reference to removal of the colon, such an operation would hardly be justifiable in mucous colitis. That operation belongs to another disease; it is too severe a remedy for the disease.

(To be continued)

AMERICAN SOCIETY FOR THE STUDY OF ALCOHOL AND OTHER DRUG NARCOTICS

Semi-annual Meeting, held in Washington, D. C., March 17-19, 1909

The object of this meeting was the presentation of some of the latest and most authentic conclusions based on laboratory and clinical experience concerning the alcoholic problem.

The treatment of inebriety was a subject of many papers, all urging that the disease side be recognized and that the patient be treated as a ward of the state, irresponsible and requiring exact care.

The unusual prominence given by the press in the daily reports shows that the subject has aroused intense interest in the public mind. It also indicates that public opinion is turning to the physician for facts and conclusions for scientific study above the present theories. The members of the society feel that the whole alcoholic problem is rapidly coming into prominence as a hygienic health subject in which physicians are the most competent, and that they will become the real teachers and students of the causes and its prevention.

Temperance Movement in the South

DR. HENRY O. MARCY, Boston: The rapid change of public sentiment favorable to more radical measures for the suppression and control of the sale of alcohol as a beverage is not mere sentiment or theory, but is due to the deep feeling of alarm and the recognition of the influence of alcohol in intensifying and increasing the social perils of home life and good government. Medical and hygienic study based on statistics, and mortality tables, indicate that alcohol as a beverage is a most active cause of degeneration and disease among the colored and illiterate classes of the South. The unrestrained use of alcohol is literally anarchy. The alcohol problem has a sanitary side of the most absorbing interest, which must be recognized as becoming a part of the practical life of every community. The unsettled condition of homes, race prejudices and conflicts incident to the evolution of a new South should have no complications from alcohol or other forces destructive to healthy growth. Industrial progress and development of the resources of the South will be obstructed and retarded unless the use of alcohol as a beverage can be controlled.

The Alcohol Problem in Every Day Life

DR. HOWARD A. KELLY, Baltimore: This problem is becoming more apparent every day in degenerations and injuries directly traceable to the use of alcohol. Alcohol as a beverage and even as a medicine has an unknown danger that may come into prominence in a great variety of diseases and conditions. It is a dangerous and uncertain drug, and as a beverage should have no place in healthy normal living.

Future of the Alcoholic Problem

DR. THOMAS D. CROTHERS, Hartford, Conn.: At present there are positive indications of the early solution of the prob-

lem by the means and measures that can not be mistaken. Experience and laboratory research have shown alcohol to be a narcotic, and its effects on the system produce a distinct disease both curable and preventable. This question is one of public health and sanitary science. The saloon for the promotion of the sale of spirits is a center for the promulgation of the disease, and is doomed to extinction from a larger and more exact knowledge. Science shows that alcohol as an anesthetic has a value in medicine, but its real power is that of a fuel, light and force producer. Cheap alcohols can be made from a great variety of sources that will be active competitors to electricity, gasoline and steam. What is needed is the invention of boilers, lamps and means to utilize and make practical this great power of alcohol. Every distillery and brewery in the country will be required for the manufacture and distribution of cheap alcohols when the inventor supplies the missing links. Alcohol will become one of the great rivals of electricity to do the world's work, because it can be made from the waste and by-products in every section of the country. Beer, spirits and all other forms of alcohol as beverages will disappear when the inventor shows us how to harness and utilize this new latent power of civilization. The future of the alcoholic problem will be followed by a great revolution in commercial industry and will be a question of sanitary science and inventor's skill.

Alcoholic Neuropathic Entailments

DR. CHARLES H. HUGHES, St. Louis: Alcohol scars and taints race stock with as much certainty as syphilis or tuberculosis; and the damaged brain or depraved blood extends far in the future. Heredity is not a theory. It is a fact that 80 per cent. of the children of drinking parents show the degeneration that has been transmitted in different forms and conditions.

Need of Legislation for Inebriates

DR. LEWIS D. MASON, Brooklyn: The defective inebriate needs legal care and control. He is more dangerous than the insane, more degenerate in his influence than the criminal and pauper, and should be segregated in special hospitals and colony homes on military plans, the inmates to contribute to the support of this institution by manual labor and to be held responsible by reward and punishments.

Effect of Alcohol on the Body

DR. BITTLE C. KEISTER, Roanoke, Va., discussed the effects of alcohol from a scientific point of view, and stated that modern laboratory research and clinical experience denies the tonic and stimulant value of alcohol, and declares that its action is that of an anesthetic and narcotic. The use of alcohol as a beverage, therefore, is a relic of barbarous times.

Responsibility in Intoxication

DR. ALBERT GORDON, Philadelphia: No one who uses spirits to excess should be considered sane and responsible. The degree of mental and moral paralysis in each case must be settled by a study of the facts. The attempt to draw dividing lines between sanity and insanity is unreal and unscientific. Intoxication is literally insanity and irresponsibility under any circumstances, and will be so regarded in the future.

Laboratory Research

DR. WINFIELD S. HALL, Chicago, in his paper on laboratory researches concerning the action of alcohol on the cell and tissues, concluded as follows:

1. Alcohol is a waste product of tissue metabolism.
2. Alcohol produces a toxic effect on living substances.
3. Alcohol in common with other toxic substances is oxidized in the body.
4. This oxidization is a means of defense, as the products are far less injurious than the alcohol.
5. Because of this defensive oxidization of alcohol, which takes place largely in the liver, the ingestion of more than a small amount of that substance makes the body more liable to other toxic invasions.
6. Alcohol can not in the nature of the case be considered a food.
7. Alcohol decreases the efficiency of muscles, glands and nervous system.
8. Alcohol is a narcotic in its drug action.
9. Alcohol given in minute doses to lower animals seriously impairs fecundity and increases degeneration and race suicide.

Toxins as Active Causes of Inebriety

DR. G. H. BENTON, Chester, W. Va.: Modern research has proved beyond doubt that inebriety is the result of poisons introduced from without, and manufactured within the body. Alcohol is a toxin that is constantly changing and that not only absorbs the water of the body, but deranges the cell material and furnishes soil for the growth of poisonous bacteria. The inebriate is literally a laboratory where all sorts of germ poisons are continually growing, and the more spirits used, the greater the derangement and weakening of vital energies.

Laboratory Study of Inebriates

DR. A. MACDONALD, Washington, D. C.: Inebriety must be studied by scientific means and measures before remedies of value can be applied. Inebriety is curable and preventable but the remedies must not be theory or sentiment. First, find the exact nature of the disease, then the problem can be settled by breaking up the breeding-places.

Alcohol and Public Health

DR. GEORGE W. WEBSTER, Chicago: The alcohol problem is more important than tuberculosis because of its far-reaching effects. It costs the United States in direct money over two billion dollars. It causes directly and indirectly at least 10 per cent. of all deaths in the United States. It predisposes to infection, destroys acquired immunity, prevents the occurrence of artificial immunity, lowers vitality and increases mortality in all diseases and in surgical operations. It lessens the power of individuals to resist the injurious influences of extreme heat and cold. It causes deterioration of the quality of mental work. It diminishes the power to withstand fatigue and lessens the efficiency of the individual. It should always be classified as a poison and never as a food or stimulant. It is a public health and sanitary question, and not a moral one, but should be treated the same as fevers, smallpox and malaria and by scientific men alone. The alcoholic problem is a medical one, and can only be solved when studied from a scientific point of view.

Effect of Alcohol on the Stomach

DR. D. H. KRESS, Washington, D. C.: Functional and organic disturbances of the stomach are both a cause and effect of the use of alcohol. All forms of alcohol are dangerous remedies for stomach disorders, as while it quiets pain and discomfort for a time, it creates new sources of discomfort and derangement. Alcohol acts on the appetite and digestion, diminishing the nutrition of the body. All forms of spirits at meals are injurious, and the use of remedies containing alcohol for stomach diseases is contradicted by scientific research and shown to be most dangerous.

Danger from Mixed Drinks

DR. HARVEY W. WILEY, Washington, D. C., discussed the danger from mixed drinks, particularly absinthe, which he declared the most dangerous drink in existence, and urged that legislation should be enacted prohibiting its use in the United States. He called attention to the many tonics on the market whose only value comes from the narcotic action of the contained alcohol or narcotic. An exhibit was made of more than fifty samples of proprietary drugs and drug cures, some of the latter containing as much as 20 grains of morphin to the ounce.

MISSISSIPPI STATE MEDICAL SOCIETY

Forty-second Annual Meeting, held at Jackson, April 13, 1909

The President, DR. JAMES W. GRAY, in the Chair

Election of Officers

The following officers were elected: President, Dr. D. W. Jones, Brookhaven; vice-presidents, Drs. J. S. Saunders, Pascagoula; J. C. Armstrong, Water Valley, and Thomas Purser, McComb City; secretary, Dr. E. F. Howard, Vicksburg (re-elected); treasurer, Dr. H. L. Sutherland, Rosedale (re-elected).

President's Address

DR. JAMES W. GRAY, Clarksdale: The State Board of Health has done very valuable work during the past year. The very high standard of qualifications required of licentiates to practice medicine promises much good to the people, and to the profession. The public interest being aroused through the efforts of the board in matters of hygiene and public sanitation is remarkable, more especially when we remember the inadequate appropriation at the disposal of the board. Since "*mens sana, in sano corpore*" in the individual is the most valuable asset of the state, an appropriation of fifty times the present amount would seem much the wiser policy.

The medical profession is regarded as the final authority in matters of hygiene and sanitation, and it is proper that it should have a larger influence in the making of the laws governing these problems. The committee on public policy and legislation has received scant courtesy at the hands of the law makers, and I believe that this is due to the fact that we have begun our agitation for reforms too late. Any candidate for election is more amenable to reason and proper argument before election than after he is safely seated, and I recommend that the Committee on Public Policy and Legislation be appointed for a period of five years, the terms of no two members to end the same year, and that an auxiliary committee be formed consisting of one member from each county in the state. The duties of the regular committees shall be the same as now, and after the policy and legislation desired shall have been decided on and outlined, the conclusions shall be communicated to each county member, and by him presented to the various candidates for senate and house, and pledges of support secured. The united strength of organized medicine in the state is a force which, if properly used, at the psychologic time, will cause a would-be solon to awaken to reason. The determined, insistent purpose and action of our profession can put any just law we want on the statute books. Since the vigorous discharge of the duties of the chairman of the committee under this program would entail much labor and expense, I recommend that a liberal appropriation for clerical expenses be made, especially during the year of a general election. The increasing number of blackmailing malpractice suits against physicians suggests the necessity of this association adopting some plan of cooperative medical defense. The prevailing impression has been that malpractice suits are more numerous in the larger cities, and that Mississippi, having few large cities, the physicians of the state do not need such means of protection. The experience of other states shows conclusively that this is not true, but, on the contrary, such suits are much more frequent in the rural districts.

As some evidence of our appreciation of the heroism of Major James Carroll, I earnestly recommend that the association appropriate not less than one hundred dollars for his widow.

Our constitution recites that the president shall be the real head of the profession of the state during his term of office, and, as such, I consider it my duty, as it will be my pleasure, to tell you a few plain truths about yourselves. As individual physicians, in your relations to your patients, no nobler, kinder nor more charitable men ornament the earth. But, as an organization, and in the discharge of your civic duties, you have been stung by the tsetse fly, and a curative serum must soon be found, or you will sleep your life away. The purposes of this organization, among others, are to aid in the "enactment and enforcement of just medical laws" and in the enlightenment and direction of public opinion in regard to the great problems of state medicine, so that the profession shall become more honorable and capable within itself, and more useful to the public in the prevention and cure of disease. And how are we discharging these sacred duties? By meeting in annual session, giving birth to most commendable and altruistic resolutions and memorializing the legislature! In the limbo of unaccomplished things are many measures of great importance to the state, and to the profession, that were pressed forward with fine enthusiasm; that were discussed and earnestly recommended by the association, and then we memorialized the legislature—and went to sleep. Periodic paroxysms of perfervid oratory, and spasmodic attacks of strenuous travail have never yet accomplished useful results. We may memorialize the legislature until the end of time, and, unless we put some force behind the memorial, we shall continue to be treated with the paltry consideration we have always received.

(*To be continued*)

PHILADELPHIA COUNTY MEDICAL SOCIETY

Regular Meeting, held April 14, 1909

The President, DR. FREDERICK P. HENRY, in the Chair

SYMPOSIUM ON THE PHYSICIAN'S ETHICS AND INCOME

Why Medical Undergraduates Need Training in Business

DR. I. NEWTON SNIVELY: It is becoming increasingly difficult for the general practitioner to make a living. Physicians have ever posed as poor bookkeepers and worse business men. In any other field, similar lack of business sense would promptly lead to bankruptcy. Adequate business training is needed in the practice of medicine because of (1) the increased demands on would-be medical graduates; (2) the growing competition and constant evolution in medical practice. A medical diploma entails a monetary outlay of at least $2,000, and beyond this a year or more of hospital experience is greatly encouraged. This makes it practically impossible for a man to enter on paying practice before the age of 25. Once in actual work, the practitioner of medicine, more than any other wageearner, is up against hard factors that make for low pay, slow pay and no pay. The professional, sociologic and legal demands on the profession are constantly increasing without a jot of regard for the material welfare of its members. Public opinion has decreed everywhere that it is a physician's duty to save life, to cure and to prevent disease; it is nowhere decreed that he must save his own life, that he must look out for the material welfare of his family. Tacitly, the profession is pledged to every demand of preventive medicine. But here no fee schedule applies, while every success that is scored only reduces the paying end of practice.

Ethical and Business Training of the Prospective Physician at the Medico-Chirurgical College

DR. JAMES M. ANDERS: On the request of the Board of Trustees and Faculty of the Medico-Chirurgical College, I deliver annually one lecture on medical ethics and another on medical economics to the senior class. Concerning the business side of the physician's life the most important period is the first decade after graduation. The recent graduate must maintain his interests in technical laboratory work, in clinical medicine, in special pathology and physiology. The public will demand physicians whose abilities have been tested by the laboratory and hospital wards and whose record is clean and good. The vital question of providing for a rainy day must be met and solved by every physician. Perhaps the best investment for a young man in medicine is a small life insurance policy in a reliable company. I should advise against the purchase of property until a reasonably accurate estimate can be made of its value ten years hence. The stock market and mining interests are to be severely let alone. The best investment for the physician's savings is in first-class guaranteed bonds bearing a moderate rate of interest. In settling in a given locality I should recommend that the physician ascertain the rate of remuneration of the physicians in the neighborhood and not expose himself to the charge of bidding for patients by making lower charges than his fellow-practitioners. The advantages of a properly organized profession are multiple, and especially can it be made to operate in bringing about better fees, better protection in case of unjust suits for malpractice and assaults on individual members, as well as a greater force, respectability and dignity as a body. From an ethical standpoint it is the duty of every physician to bring the local profession, wherever he may settle, into good repute, by attempting to overlook the imperfections so patent in others, and by reposing with confidence in the fair-mindedness and liberality of his competitors. The request for a

consultant on the part of the patient's family should be cheerfully complied with, though there may be no apparent necessity, provided of course, that the consultant desired be a regular physician. No one can afford to decline to consult with a regular practitioner of the female sex and the same is true of the graduate in homeopathy who does not practice sectarian medicine. The post of a consulting physician is one of momentous importance and grave responsibility. The rights, privileges and interests of the attending physician must be jealously guarded and never must advantage be taken of any circumstances incident to the consultation. In any critical emergency, a physician should not hesitate to visit the patient of another physician, but must voluntarily withdraw from the case as soon as the services of the attending physician can be procured, unless the latter should insist on his remaining connected with the case. When great probability of an early demise arises, it is the physician's duty to give timely warning either to the patient himself or those most directly concerned. The ministrations of the clergy are a solace and a comfort to the desperately ill and dying.

The Possibilities of a Mutual Business Bureau

DR. A. B. HIRSH: The lack of systematic financial training of the undergraduate, the ever-increasing socialization of medicine, contract practice, growth of plainly commercial new cults, so called, are largely responsible for the physician's lessened opportunity. It is only through united efforts by our rank and file that protection against the dishonest patient will be secured. It is along the line of credit and collection offices that Philadelphia physicians must find relief. Chicago physicians have obtained marked benefits from their year-old "business bureau." From supposedly uncollectable accounts over $22,000 have been received. Within the past year there have been formed in various parts of Philadelphia business leagues. Others will be established and later there will follow their union into a central business bureau for collection of accounts and for information as to undesirable patients, when there will be in existence a credit guide covering the entire city. The details are as follows: Each member of a medical district league, on payment of the one-dollar annual due, receives sufficient blank catalogue cards for his questionable pay patients. By the use of an easily understood cipher code, each card serves for the history, etc., of one family, or of one patient. When filled out by the physician these are returned to the secretary for filing in his indexed desk drawers and kept under lock and key. The physician's number, but not his name, is on each card, this number agreeing with that on a book list of physician-member addresses in the secretary's safe. Information wanted by a physician about a new patient is obtained by telephone from the secretary's office, the doctor's number only being used in such a conversation. Confidences are thus always assured. The secretary's recompense is 5 cents per message. The plan warrants up-to-date information, while printed lists are found obsolete because of frequent removals of delinquents. By multiples of each card of details an exchange system between the leagues is possible. My plea is for early organization of a business league in each part of the city so that the central business bureau can be realized at the earliest possible date.

Discussion on Business Methods

DR. A. M EATON: These business leagues are not for the purpose of collecting bills, but to prevent a class of undesirables from robbing physicians, and we think that we shall be able to accomplish that purpose. A case in point is that of a young physician who was asked to withhold his bill for over $120 for a year, when the people promised to pay in full. At the end of the year, they paid $10. Fearing to lose all the money he continued his attendance for three years and then stopped. They then owed him nearly $400, for which, after some years, he sued. He settled the claim for $100 and paid the lawyer $50.

DR. AARON BRAV: I do not think it good teaching to say that the young practitioner should ascertain the average charge of physicians in his locality and then make his own to correspond. If the young man, surrounded by hospitals and dispensaries, insists on the same fees as those received by the man in practice for twenty years, he, of course, will not succeed. I do not feel that contract practice should be condemned utterly. Under some conditions I can see that a man could so practice without doing harm to his fellow-practitioners and that he might save many families from attendance on the hospitals and dispensaries, the abuse of which is responsible for all the ills. Medical ethics should be taught, but they ought to be on a sound basis and with some degree of fairness as to what constitutes ethics.

DR. SAMUEL P. GERHARD: I do not like the word "business." Some other word ought to be used. It seems to me that in the college the student ought to be taught first that the practice of medicine is not solely humanitarian, as so many people claim. Students should be taught that they are entering the practice of medicine to relieve suffering and to treat disease, and they should expect to be paid for it.

DR. ALBERT E. ROUSSEL: I am inclined to think that a very common fault exists among ouselves. In the early years of my practice I remember a physician who had an exceedingly large practice, actually working day and night, and who was known as a man who never sent out a bill. He did not collect 25 per cent. on his work and literally worked himself to death. Many people think that a medical practitioner should not sue for his bills. I have collected over 80 per cent. on the work I have done by frankly going after my patients. I should think the idea of establishing a bureau as suggested by Dr. Hirsh would be a very good one.

DR. JOHN A. MCGLINN: When we remember that there is one physician to every five hundred people we recognize that the profesion is overcrowded and that the first thing to do is to raise the standard of medical education. We must recognize also that a man graduates in medicine at a time when other men of his age are making money and at twenty-six he is up against a proposition, with competition so keen that he can hardly be blamed if he accepts contract practice, a low rate for insurance examinations or lowers his fees. The public also should be taken into the confidence of physicians and the mysticism of medicine done away with.

DR. SENECA EGBERT: I feel that the standard of medicine is being raised and that the number of physicians in the future will be less than in the past. The idea of establishing a central body like the Chicago bureau is most admirable. We have done our share in pauperizing people. I agree with Dr. McGlinn that we do not sufficiently educate the public in regard to medical matters.

DR. HIRSH: The size of fees and contract practice will have to be viewed from more than one standpoint. We must remember that the various classes of population, gradations of wealth, native and foreign-born inhabitants are factors in this question. I believe the free choice of the physician will be the solution of the contract practice problem. Great advantages are to be secured by an early organization of the business leagues as described to be located throughout the city with the ultimate establishment of a central business bureau.

Sodium Benzoate as a Food Preservative

The following resolution was adopted by the society:

WHEREAS, there has passed the legislature and is now before Governor Stuart, a bill which would legalize the use of sodium benzoate as a food preservative in the quantity of one-tenth of one per cent.; and

WHEREAS, the vicious features of this bill in its original form, such as the main label clause and the notification clause, were sufficient to indicate plainly that it was not drafted in the interests of the public, but rather that of powerful special interests; and

WHEREAS, it is declared by manufacturers of the very class of products which it is desired to preserve with sodium benzoate that its use is unnecessary, provided good sound materials and proper sterilization methods are employed,

Therefore, the Philadelphia County Medical Society places itself on record as believing that the bill as it has passed the legislature would be against sound public policy, inasmuch as it would permit the incorporation into food of a drug which would benefit the manufacturers of food products at the expense of the consumer.

Resolved: That this body urges on Governor Stuart the propriety of vetoing this bill, so that the progress which has been made in the regulation of pure foods may not be reversed and the door opened to the chemical preservation of many products which now enter into the daily food supply of the people of Pennsylvania.

MISSOURI VALLEY MEDICAL SOCIETY

Semiannual Meeting, held at St. Joseph, Mo., March 18-19, 1909

Public Health Problems of the Nation

SURGEON-GENERAL WYMAN, U. S. Public Health and Marine-Hospital Service: Two kinds of problems must be considered: sanitary and legal. Of the two, the legal are the least settled. Scientific knowledge of disease and methods of prevention are far in advance of legal provision and executive administration. A comparatively short time ago smallpox, cholera, typhus, yellow fever, plague and leprosy were problems of a scientific as well as legal character. For centuries these diseases baffled the wisdom of man, inspired terror and gave rise to investigations, theories and procedures which were of no avail. The quarantine of to-day is not deserving of the same name as the first quarantine which was imposed at Venice in 1403 against plague. Then vessels were simply held at a short distance from shore, and the disease was allowed to run itself out. To-day quarantine is simply the isolation of the sick and the detention under observation of exposed individuals during the period of incubation of the disease in question. Another problem practically solved or being solved is that of immigration. Until the passage of the immigration law of 1891 there was no hindrance to the influx of immigrants afflicted with diseases other than those which were quarantinable. Our cities and towns were receiving immigrants afflicted with loathsome diseases, particularly favus and trachoma, but this invasion has practically stopped and other diseases of like nature are regularly excluded. In regard to international hygiene and sanitation the various international sanitary bodies may be expected to have an aggressive effect on sanitary reforms. The manner of making international sanitary agreements and organizations having a practical bearing is one of the greatest of modern problems. In the American republics the matter has gone so far as to be included in resolutions adopted at the third International Sanitary Conference of American States held in Rio de Janeiro in July, 1906, namely: "The adoption of measures tending to obtain the sanitation of the cities, and especially of the ports, and to attain as far as possible to better knowledge of the greater observance of hygienic and sanitary principles." The National Government, aside from quarantine regulations, regulations regarding the manufacture and sale of the various vaccines, antitoxins, etc., and those relating to pure food, is engaged chiefly in investigations and the dissemination of information, and in bringing about cooperation between its own organizations and those of the various states.

Oration in Medicine: Diagnosis of Kidney Disease

DR. N. S. DAVIS, Chicago: The limitations for the diagnosis of renal disease was emphasized by Cabot two years ago, when he reported the results of his attempt to ascertain what urinary findings were actually related to definite pathologic lesions by comparing the histories and especially the urinalyses in a large number of cases. The presence of albumin and casts in urine indicates disturbance of function or change in structure, but nephritis may exist without the presence of either albumin or casts. Large numbers of red corpuscles in the urine indicate an actively developing lesion—either acute, or an exacerbation of a chronic one. A large amount of sediment, composed chiefly of casts or epithelial cells, or both, indicates extensive involvement of the renal tubules; but few casts and no epithelial cells do not mean that the tubules are not involved. In the differential diagnosis of the various diseases of the kidneys it is necessary to give as much weight to other symptoms, to the etiology, and to the course of the disease as to the urinary findings. Acute nephritis may be caused by the exanthema, pregnancy, septicemia, typhoid, diphtheria, tonsillitis, pneumonia or rheumatism. Varicella, vaccinia, syphilis and tuberculosis are rarely causes. Intestinal toxins and some drugs may also be causes of acute nephritis. Chronic indurative nephritis is caused by an acute attack or by a chronic constitutional disease which leads to anemia or cachexia. Exposure to cold is intentionally omitted from this recapitulation of causes because it should be considered simply as a predisposing factor, not as a direct cause. In determining the gravity of kidney diseases, it is not enough to know that the kidneys are involved or even to know their exact pathologic condition—it is extremely important to ascertain whether or not they are functionally active and competent. In testing the function of the kidneys it is just as necessary to give a test meal as in examination of the function of the stomach. Milk is the most practical substance to give, as its constituents are fairly well known.

Oration in Surgery: Cancer of the Uterus

DR. H. J. BOLDT, New York: As a reason for belief in the possible correctness of the hemic theory of the origin of cancer, is the fact that some pathologic processes causing decided alteration in the blood set free strong antagonistic factors to cancer. The malignant neoplasms of the uterus resemble each other so closely that it is almost impossible to differentiate them. In practically every case of uterine cancer there is a history of previous endometritis. Jewish women do not seem to be so susceptible to cancer as Gentile women. If pain were an early symptom instead of the latest, the diagnosis would be made much earlier, and many lives would be lengthened. The bladder and kidney complications are the most important. Rectal symptoms do not develop till late in the disease. In treatment, total extirpation is the most important thing. Prolonged anesthesia should be avoided as much as possible, and for this reason the patient should be thoroughly prepared for the surgeon before being anesthetized. In cancer of the vaginal part of the cervix and body, it is not necessary to do such extensive operation as in cancer starting from the cervical canal. The abdominal route for extirpation should be limited to cancer of the cervix, and to cases in which the uterus is too large for vaginal extirpation or in which there is adnexal disease. A larger number of patients may be operated on by the abdominal than by the vaginal route. I have had no experience with vaginal hysterectomy with a galvanocautery, and have never favored the high amputation of the cervix or of its vaginal part; I believe that this operation will soon be relegated to oblivion. When diabetes complicates malignant disease, in cases seen early enough to give hope of cure, operation should be done, but without general anesthesia, and should be rapidly performed.

How the Physician Can Best Serve the Community in which He Lives

DR. E. H. MILLER, Liberty, Mo.: Some physicians have opportunities only to relieve suffering, and are thereby deprived of the real beauty of their profession. This is particularly the case with the specialists and the city physicians. The country practitioner, however, is an important part of the community in his professional capacity. He is no longer called on merely to treat suffering individuals, but must aid in the great movement for prevention of disease and injury, and for the uplifting of the general condition of the community. The public can not be expected to swallow anything the physician tells it about a public necessity, unless something tangible is brought forward for it to grasp. Therefore, education of the public is the most essential necessity in all public health work and the country practitioner can do this better than others because he is brought into contact with people of all classes, under circumstances that render them especially susceptible to his influence. There are many ways in which the physician can assist in the prophylaxis of disease. For instance, he may cause the health officer to inspect the milk supply at proper intervals, and particularly he should visit the public schools, not only in time of epidemics, but at other times, to notice whether the light, air, water, etc., are properly supplied, without waiting for the death of one of his patron's children to stir him to action.

The Management of Enlarged Spleen

DR. T. E. POTTER, St. Joseph, Mo.: In the hands of competent operators the death rate in splenectomy is from 10 to 20 per cent. Anything that will remove this high percentage of failures should be gladly received. In 1878 I began the hypo-

dermic use of ergot in enlarged spleen, as advised by Da Costa, and with happy results. To accomplish results with this treatment requires time and patience. The *x*-ray may be as good or better than ergot, but I have had no experience with it.

Anesthesia in Children

DR. WILLIAM W. STEVENS, St. Louis: When operation for adenoids or large tonsils is to be done the child should be examined by a pediatrist for enlarged thymus and the status lymphaticus, the presence or absence of lymphotoxemia being noted. If present, operation should be deferred if possible. Nitrous oxid is not a good anesthetic for very young children. The statement that chloroform is harmless in children is altogether erroneous. Chloroform is the most poisonous of all anesthetics in the status lymphaticus. The picture presented by a child during chloroform anesthesia is one of profound depression. The margin between an overdose and "just enough" is infinitely smaller in children than in the adult. False anesthesia is present more often in children than in adults, and is most often seen when chloroform is used. The charge that ether is more dangerous to the kidneys is not proved. For children, ether on an open mask by the drop method is the best and safest routine anesthetic; the closed method is not suitable for young children. The delivery to the child of an ether vapor which has been warmed after the air or oxygen has been laden with ether is without doubt the most ideal method yet suggested.

Osteomyelitis

DR. F. H. CLARK, El Reno, Okla.: Whenever it is possible to do so, the microscope should be used to determine the germ causing the disease. Palliative treatment should always be instituted and persisted in until improvement ceases or there is danger of the disease becoming general instead of local. If the case is seen in the acute stage, cutting down and draining by trephining into the bone gives great relief. During the subacute or chronic stage all necrotic bone including the sequestra, should be removed. In the tuberculous form, iodoform seems to be especially helpful, used in some one of the numerous ways suggested; also tuberculin promises us some assistance in this condition if carefully used. In the young, prognosis as to recovery and function may generally be very favorable, while in those older it should be more guarded.

The Mastoid Operation

DR. CORNELIUS WILLIAMS, St. Paul, Minn.: I wish to go on record as favoring early operation. Formerly, mastoid wounds were packed in various ways and for the incomplete operation that must yet be done. Packing adds to shock, prolongs the period of healing, renders first dressing painful and infection more likely; also, the scar in packed wounds is prominent. After removing all diseased bone and opening all cells the antrum should be well cleaned, all pus and blood being removed from the auditory canal, and incision made through the membrana tympani, if necessary, and the middle ear aspirated several times with a rubber bulb. A gauze wick, wet with normal saline solution is then introduced near the bottom of the canal, the gauze mask removed from the side of the head, the skin wiped dry, brushed again with the iodin solution, and the incision closed by subcutaneous catgut suture to the mastoid tip, the wound covered with a yoke-shaped pad of gauze, well padded with cotton, and the head bandaged. Unless skin infection occurs, the wound should heal by first intention, except at the lower angle, where there will be oozing of bloody serum, as well as from the middle ear. This oozing hastens cure by its action on the micro-organisms.

Other Papers Read

Among the other papers read were: "The Use of Carbon Dioxid Snow in Dermatology," by Dr. R. L. Sutton, Kansas City, Mo.; "A Study in Reflexes," by Dr. L. Crafts, Minneapolis; "Diphtheritic Paralysis," by Dr. F. E. Coulter, Omaha, Neb.; "Autointoxication," by Dr. A. E. King, Blockton, Iowa; "Possible Means for a Better Comprehension of Immunity," by Dr. J. Block, Kansas City Mo.

THE AMERICAN SOCIETY OF TROPICAL MEDICINE

Sixth Annual Meeting, held at the United States Naval Medical School, at Washington, D. C., April 10, 1909

(Continued from page 1449)

Schistosomiasis (Japonicum), with Special Reference to Observations in Hunan Province, China

DR. O. T. LOGAN, Chingteh, China: The existence of this disease seems to be connected with wet farming. Diagnosis is usually easy, though it may be necessary to make examinations on several days before the characteristic ova are found in the stools. It is believed that the infection takes place through the skin in persons who wade in stagnant water. The prognosis is bad in heavy infections; and even light infections lower the vital resistance, and render the patient more liable to concurrent infections.

Prevalence and Importance of Uncinariasis Among Apparently Healthy Southern-Bred White Men in the U. S. Army

MAJOR WESTON P. CHAMBERLAIN, Louisiana: Uncinariasis is common among soldiers of less than three years' service. Of one hundred serving in their first enlistment, sixty were infected. It is believed that uncinariasis in childhood is the cause of the poor development so common among southern-bred recruits. Those who lead a farm life are frequently infected with hookworms, as most persons on farms habitually go barefooted in childhood; more than half of these have, probably, suffered from ground-itch during their youth.

Mild Uncinaria Infections

DR. CHARLES C. BASS, New Orleans, called attention to the fact that the negro presents few symptoms, even when laboring among parasites. He then described in detail the method of obtaining the ova by the means of the centrifuge.

Discussion on Parasites

DR. W. S. THAYER, Baltimore: It would be of great interest to study the stools of *Strongylus stercoralis* by the method described by Dr. Bass, in order to determine the relative measurements of these eggs and those of uncinaria. The eggs of the former are rarely found in the stools; and when they are found, are so like uncinaria that there is sometimes a question as to which they are.

DR. J. M. SWAN, Philadelphia: A patient recently came under my observation who at periods of four weeks had had epileptiform attacks of considerable severity. On examination of the blood, an eosinophilia of 15 per cent. was found. A rather large flagellate infection was discovered by examining the stools. After appropriate treatment for two months, there was no return of the convulsions. In spite of repeated examinations of the stools, I failed to discover any uncinaria eggs.

DR. JOSEPH SILER, Port Jay, N. Y.: The question of prophylaxis of uncinariasis ought to have more attention, as the South will never get rid of the hookworm unless the subject is taken up by the government. The fact that nearly all the children of the South are infected makes me believe that if that section could get rid of the hookworm much would have been done for humanity.

MAJOR CHAMBERLAIN: My cases were widely distributed, every state in the South being represented, even as far north as Maryland.

DR. C. C. BASS: Ridding the South of this infection is of great importance. I think, however, that the question must be one of education, rather than of legislation, as it would be impossible to force the layman by law to observe such sanitary measures as would be necessary to prevent this disease.

The Relation of House Flies to the Spread of Disease

DR. HENRY SKINNER, Philadelphia: This insect oviposits in horse manure, decayed vegetable matter, decayed meat, cow dung, fowl droppings and human excrement; but the vast majority of house flies are bred in horse manure. The house fly

as a carrier of typhoid infection is very dangerous. Whenever flies can gain access to material containing the *Bacillus typhosus*, they are almost certain to carry it to food. They have long been suspected of being agents in the dissemination of cholera and other intestinal diseases. So far as is known, however, the house fly is only the mechanical conveyer of bacteria, and is not the host of any known animal disease-producing organism similar to the protozoan organism that causes malaria. If the insect can be prevented from depositing its eggs in horse manure, the fly as a pest will soon be a thing of the past. The manure should be packed into barrels that can be tightly covered.

DISCUSSION

DR. P. M. ASHBURN, U. S. Army: Some time ago I prepared some slides covered with serum, when I discovered a fly busy eating some of this serum. I caught the fly and found in its proboscis two larval nematodes that were indistinguishable from strongyloides. I thought that in this way the fly might be a carrier of intestinal parasites—possibly of uncinaria. In the Philippines flies are much less common than in the United States in the summer time.

DR. LOGAN: In China the blue-bottle fly is more common than the house fly.

DR. GEORGE DOCK, New Orleans: The only way to get rid of house flies is to observe absolute cleanliness. If a soup plate containing sugar water and a 10 per cent. formalin solution is placed in the room, it will be found effective in keeping the flies down. The odor can not be perceived, but the flies are absolutely destroyed.

MR. H. L. VIERECK, Washington, D. C.: At the laboratory in Harrisburg, Pa., while specimens were being immersed in 4 per cent. formaldehyd solution, it was found that the flies were attracted by the formaldehyd solution, which they sucked up, and that they died in great numbers.

DR. H. SKINNER: There are numerous records of places in the tropics in which house flies are very abundant. Further information would be very valuable, as the pest is one distributed pretty well all over the world, and is especially prevalent in southern Europe.

The Etiology of Pellagra

DR. C. H. LAVINDER, U. S. Public Health and Marine-Hospital Service: After an exhaustive review of the subject, I have reached the following conclusions: The cause of pellagra is essentially unknown. The idea, in one form or another, that there is an etiologic relation between pellagra and the use of maize as a food is not likely to be abandoned, as it rests on the observations and experimental work of many able men. Sambon's suggestion of the possible sporozoal nature of the disease rests largely on an argument from analogy and is, at present, little more than a suggestion. It offers new and possibly profitable fields of investigation.

Relation of the Production and Utilization of Maize to Pellagra

DR. CARL L. ALSBERG of the Bureau of Plant Pathology: The greater prevalence of pellagra in the United States than formerly may be attributed to (1) differences in the variety of corn grown; (2) changes in the climate; (3) the spreading of the corn-belt northward; (4) the manner of transporting corn, and (5) changes in the methods of milling. In the south the germ of the corn is left in when it is milled; for this reason, the meal milled in the south contains a much higher percentage of toxins. I suggest that the standardization of grain be carried out by the Federal Government, which should enforce the proper drying of corn.

Discussion on Pellagra

DR. GEORGE DOCK, New Orleans: From Dr. Alsberg's remarks, one might get the idea that pellagra had developed in this country simply through the change of conditions for the raising and selling of corn; but I am certain that I had heard of cases before the existence of these changed conditions. I think that the main point is that the disease exists now, in a form difficult to recognize, and very often mistaken, as the clinical recognition of the disease is difficult in the less marked cases.

DR. J. M. ANDERS read a note from Dr. Theodore C. Merrill, enclosing a report on "Pellagra in the State of Texas." The note was, in part, as follows: Some time ago I reported a case, which I took to be pellagra. I was duly cautious, and examined thoroughly the suspected corn meal. But with this exception (which is doubtful), it is gratifying to be able to report general absence of this disease for the state.

Dr. Anders then called attention to the fact that of 196 cases of pellagra collected by Dr. Wood, 70 occurred in North Carolina. He said that the acute form of pellagra proved fatal in from four or five weeks to three months, this form being unknown in Italy. The average duration of cases here, in the chronic form, was only three years; whereas in Europe it was at least five years.

DR. EDWARD STITT, Washington, D. C.: In not a single case of pellagra that was shown me in Egypt, could I see any typical symptoms.

DR. WILLIAM THAYER, Baltimore: In a case that I saw in 1905, the patient had had two previous attacks, associated with diarrhea, an eruption on the back of the wrists and marked stomatitis. This condition lasted about a month and then cleared up. Intensive arsenical treatment had produced some very good results in trypanosomiasis. Therefore, it was tried in cases of pellagra on two successive days. In many cases there was a prompt recovery, and it was unnecessary to give the treatment a week later. I consider this result so remarkable that I can not help feeling skeptical regarding it.

DR. T. B. FUTCHER, Baltimore: Is it known how long a person must be subjected to the infection in order to develop the disease?

DR. C. L. ALSBERG: I do not think that there were any exact data regarding exposure to infection. I think that a good many cases are overlooked in this country, especially in colored people.

DR. C. H. LAVINDER: Not enough reports have been received from men who have seen the disease clinically to enable one to draw conclusions. While the Italians do have an acute pellagra, what they mean by this term is an acute exacerbation of a chronic case.

The Method of Teaching Tropical Medicine

DR. EDWARD R. STITT, Washington, D. C.: I refer here entirely to the teaching conducted in schools outside of the tropics, in which no tropical material is available. Instead of showing a tropical climate case and giving the differential diagnosis from a temperate-zone disease, one should exhibit a case with a disease common here and differentiate it from one common in the tropics. More attention should also be given to epidemiology, and to relate an amusing anecdote in connection with the description of a disease will often impress students as nothing else will.

Ipecac Treatment of Amebic Dysentery

DR. GEORGE DOCK, New Orleans: I urge the more frequent use of ipecac, the neglect of this drug being in direct opposition to the strong recommendations made by experienced physicians in India, the United States and Manila. Vomiting is hardly ever produced, even with doses of 60 or 80 grains a day. The clinical result is most striking; the amebas disappear quickly, as a rule. Subjective discomfort is often surprisingly slight.

DISCUSSION

DR. STITT, Washington, D. C.: In the Philippines excellent results are obtained by the use of ipecac. I had an amebic affection for two or three years, and the only thing that did me any good was ipecac. After using it for three or four days, I would lose my appetite, and be forced to discontinue the drug.

DR. J. M. ANDERS, Philadelphia: Has Dr. Dock encountered any patients who were cured? I have found the cure only temporary.

DR. P. M. ASHBURN, U. S. Army: I have seen only two patients who did not promptly recover under ipecac treatment if they could retain the drug. If I can not cure the disease within a month I feel doubtful of ever curing it.

DR. G. DOCK: I have been unable to follow all of my cases up. I consider ipecac more effective than any other drug in acute cases and have had better results from it in cases of long standing.

Other Papers Read

The following papers were also read: "A New Method for the Preparation of Flat-Worms for Study," by Dr. A. J. Mink, Washington, D. C.; "Report of a Case of Dermatobia Noxialis Infection Contracted in Southern Mexico," by J. D. Mangét, Atlanta, Ga.; "Blood Pressure in Yellow Fever," by Dr. J. B. Guthrie, New Orleans.

Medicolegal

Life Tables and Expert Testimony

The Supreme Court of Iowa says, in the case of Peterson vs. Brackey, that life tables offered in evidence were objected to on the ground that it affirmatively appeared that in view of the habits of the decedent such tables did not tend to show what his expectancy of life would have been. But such tables may go to the jury for what they are worth, although they relate to the expectancy of a person in good health, and without impairment by bad habits. They are not conclusive, but may be considered by the jury in connection with evidence as to the physical condition, vocation, and habits of the person whose probable length of life is to be estimated by the jury.

The jury was instructed in this case that if the evidence introduced on the trial showed the acts, conduct, demeanor, and conditions of the decedent to have been substantially as stated in certain hypothetical questions, then the testimony of the medical witnesses, based on such questions, might be given such weight and value as the jury believed them fairly entitled to. If, however, the evidence did not substantially sustain the supposed state of facts presented in the hypothetical questions asked such witnesses, or if the testimony of such witnesses was in conflict with physical facts, then the jury should attach no weight whatever to the answers of medical witnesses founded thereon. While it was left to the jury in this instruction to determine whether the facts assumed in the hypothetical questions had been found to be "substantially as stated in such hypothetical questions," yet the jury were told that if not found to be substantially as stated, the answers of the medical witnesses to such questions were to be given no weight whatever. This the court thinks to be in accordance with the rule announced in its prior decisions, in other cases, where it was held erroneous to leave it to the jury to say whether the facts stated in the hypothetical questions were unsupported by the evidence in material respects or how much weight should be given to the answers if there was a discrepancy between the facts assumed in the questions and those shown by the evidence.

In one of those cases an instruction was criticized which left it to the jury to say whether the statements of fact assumed in the hypothetical questions were substantially correct, but it was not intimated that the case would have been reversed on this ground. It certainly is not necessary that the facts assumed in a hypothetical question shall be proven in every material detail to the dotting of an "i" and the crossing of a "t," and, while the court might properly have omitted the word "substantially," it is not believed that the jurors were misled by its use. It was not left to them to say which of the facts recited were material, but only to say whether the facts recited were substantially proven; that is, whether each of them was in substance found supported by a preponderance of the testimony.

Skill and Care Required of Specialists

The Supreme Court of Vermont says that the plaintiff in the case of Rann vs. Twitchell, a robust boy of 13 years, found a railroad torpedo which he laid on a plank and exploded by throwing a stone on it. A flying fragment struck him under the inner corner of the right eye. The cut made in the lower lid of the eye was approximately an inch long, and at the upper end next to the inner corner of the eye the lid was cut off so that it hung down over the cheek, disclosing a wound under the eyeball into the socket of the eye. The boy was at once taken to a physician who took medical charge of the case and treated the injury for about a week.

In the meantime, the physician became convinced that there was a foreign substance lodged in the eye or socket, and being uncertain whether or not or how far the eye itself might be involved, and, not feeling competent to operate on the eye in these circumstances, he advised the employment of an eye specialist. The boy was taken to another town for the purpose of consulting an expert, but the latter was away, so he could not be seen.

The accident occurred on April 19, and on the 25th the first physician, and another who had been called in to assist, and who agreed that there was a foreign substance in the eye, made preparations to operate for its removal. But, when it came to the point of beginning the operation, the first physician telephoned to the defendant, in still another town, that the plaintiff had been injured by an explosion, and that some foreign substance had entered the orbit of the eye, and that he did not feel competent to remove it, and he arranged with the defendant to send the plaintiff to him for treatment. The plaintiff was thereupon taken to a hospital, where the defendant undertook the treatment of the case. He made no effort to learn anything further of the history of the case or its prior treatment. He did not attempt to determine by probe or otherwise whether or not there was in fact a foreign body lodged in the eye or its orbit—beyond an external examination more or less cursory in character, according to the evidence—though it was plain that the use of a probe would have easily and safely discovered the presence of the piece of tin which was afterward removed. He gave the eye attention for a few days, and then sent the plaintiff home, assuring him that there was nothing in the eye and with instructions to the first physician as to its subsequent treatment.

The eye grew steadily worse until July 18, when the first physician operated on it and removed from the orbit a piece of tin nearly an inch long and about one-half inch wide, which was buried in the tissue to such a depth that its nearest point was about a quarter of an inch from the surface. This action for malpractice was subsequently brought against the defendant and the hospital jointly, but during the progress of the trial, at the plaintiff's request, the court ordered a verdict for the hospital and the trial proceeded against the defendant alone. At the close of the plaintiff's evidence the court ordered a verdict for the defendant. The propriety of this action of the court was the only question presented to the Supreme Court.

At the outset of the discussion the parties disagreed as to the rule which was to be applied to this defendant to test the sufficiency of his diagnosis and treatment of this injury. The plaintiff claimed that the evidence was such that the defendant must be judged as a specialist, while the defendant insisted that there was no evidence to warrant the application of anything but the rule governing general practitioners. The Supreme Court quite agrees with the court below that this defendant must be judged in this case by the more exacting rule which applies to specialists.

More of the evidence on this subject came from the defendant himself. From him the court learned that he was a physician and surgeon, and for the 12 years preceding the trial he had been a specialist in the medical and surgical treatment of the eye. As early as 1902 he was regularly appointed ophthalmatist of the hospital mentioned, and then presumed that he would be and later knew that he was so named in a certain pamphlet issued by the hospital that year. At the time here involved, he had charge of the eye, ear and throat department of that institution. He said that the term

"ophthalmatist" means an eye specialist; one who does everything that is required for the eye, medical or surgical. True, he said the term does not imply any special skill in such matters, but in this statement he was too modest. His 12 years of specialized practice, his selection by an institution of the high standing of the hospital to take charge of the very important department named, implied skill in the lines specified.

Moreover, the very circumstances in which he was employed in this case unmistakably showed that it was the special skill that he was understood to have in the surgical treatment of the eye which alone induced the plaintiff to seek his aid, and it was perfectly plain that the defendant so understood it when the physician made the arrangement with him to treat this injury. So the court must test his professional conduct in this matter, not by the standard applicable to general practitioners—the oft-cited and recently approved rule of Hathorn vs. Richmond, 48 Vt. 557—but by the stricter rule applicable to specialists. Whether or not this was determinative of the case the court does not say.

One who holds himself out as a specialist in the treatment of a certain organ, injury or disease is bound to bring to the aid of one so employing him that degree of skill and knowledge which is ordinarily possessed by those who devote special study and attention to that particular organ, injury or disease, its diagnosis and its treatment, in the same general locality, having regard to the state of scientific knowledge at the time. 5 Thompson on Negligence, section 6714; Feeney vs. Spalding, 89 Me. Ill.; Baker vs. Hancock, 29 Ind. App. 456; note to Gillette vs. Tucker (Ohio), 93 Am. St. Rep. at page 664.

The duty of exercising this degree of skill attached to this defendant at the time of his employment and was the measure of his responsibility in the diagnosis of the case to determine the nature and condition of the injury, as well as the proper treatment to be applied. Thomp. Neg., section 6717; Ely vs. Wilbur, 49 N. J. Law, 685. He was not to be judged by the result, nor was he to be held liable for an error of judgment. His negligence was to be determined by reference to the pertinent facts existing at the time of his examination and treatment, of which he knew, or in the exercise of due care should have known. It might consist in a failure to apply the proper remedy on a correct determination of existing physical conditions, or it might precede that and result from a failure properly to inform himself of these conditions. If the latter, then it must appear that he had a reasonable opportunity for examination, and that the true physical conditions were so apparent that they could have been ascertained by the exercise of the required degree of care and skill, for, if a determination of these physical facts resolved itself into a question of judgment merely, he would not be held liable for his error. Manser vs. Collins, 69 Kan. 290; Langford vs. Jones, 18 Or. 307; Staloch vs. Holm, 100 Minn. 276.

Tested by this rule, the evidence tended to show that the defendant's conduct did not measure up to its requirements. He had a fair chance to examine the eye, and, with the indications of the presence of the piece of tin so strong as the testimony of the first physician tended to show, it could not be said as a matter of law that the defendant in his preliminary examination to ascertain the essential data on which to predicate a professional opinion met the requirements of the rule above stated. The testimony tended to show that he did not, and the question should have been submitted to the jury, for the evidence showed that the tin ought to have been removed at the earliest possible moment.

Wherefore the Supreme Court reversed the judgment rendered by the lower court in favor of the defendant specialist and sent the case back for a new trial.

Duty When Passenger Becomes Insane on Train

The Supreme Court of Arkansas says, in Iron Mountain & Southern Railway Company vs. Woodruff, that when a passenger unattended becomes insane on a train it is the duty of the railway company to remove such passenger, where the comfort and safety of other passengers on the train require it. But in performing this duty to the other passengers the company must not neglect the duty it owes to the unfortunate insane and helpless one who is also a passenger. Here an unattended woman passenger who became insane on a train was removed from it and left in charge of the night operator at a station, whose discretion, it appeared, caused him to abandon in haste the poor unfortunate left in his care. The law, however, required that his discretion should be exercised in the direction of the woman's comfort and safety, and not in leaving her to her fate. His duty was to exercise such care as any reasonably prudent person should, under the circumstances, to protect her against harm and to provide for her comfort. If he was so alarmed that he could not do this himself, it was his duty to call to his assistance others who could. He wholly failed to discharge this duty, and for any injury that resulted to the woman from this cause the company was liable.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal

April 24

1 *Theories and Problems of Heredity. J. Wright, New York.
2 *The Psychologic Basis of Inebriety. T. A. Williams, Washington, D. C.
3 *Acute Suppurative (Phlegmonous) Ethmoiditis in Children Resulting in Death. F. Krauss, Philadelphia.
4 Spontaneous Combustion (continued). J. Knott, Dublin, Ireland.
5 Further Investigation of the *Spirochæta Lymphatica*. F. Proescher, Pittsburg.
6 Bilateral Ununited Fracture of the Patella with Good Functional Result. S. Lange, Cincinnati.
7 Significance of High Blood Pressure in Life Insurance Examinations. R. Grace, New York.

1. **Theories and Problems of Heredity.**—Wright discusses the affiliation of the specific problems of cancer with the specific problems of heredity, and endeavors to establish the point that visible pathologic morphology in cancer, like physiologic morphology in heredity, is dependent primordially on forces which influence molecular, rather than molar, arrangement.

2. **Inebriety.**—Williams asks the following questions: What is the nature of this impulse? What is its origin? Why is it so irresistible? Finally, can it be overcome in those in whom it occurs, and how may its occurrence be prevented in others? The nature of the impulse is a state of feeling, the call of the unsatisfied, the miserable and the depressed. It is the unfortunate appanage of certain individuals, but in most cases it has arisen from ignorance and has been fostered by mismanagement. Experiments show how persons differ from day to day in mental capacity, in bodily secretions, and in activity. This is equally true of the feelings. Nearly all of us, then, must necessarily encounter phases during which our feeling is one of incapacity, even of inaptitude, discontent, disike of surroundings, anxiety, etc. If fortitude is not forthcoming to support this it is ended by an artificial stimulus. The outcome is the need for a large stimulus to overcome a trifling feeling; for the power of resistance progressively decreases by non-use. The immediate satisfaction of desire at all cost is a habit that can be made or unmade at will. It is toward this factor that the prevention of inebriety must be directed. The remedy is the teaching of mothers to form healthy emotional habits in their children. The overthrow of the method of obedience has enthroned, especially in this country, the immediate impulse of the ruling factor. The surest forerunner of unreasoning conduct in an adult is a childhood that is taught to act without understanding and to understand without acting. A vast majority of parents and teachers do not appreciate the tremendous possibility of character building through play. The superiority of play as against work in the development of a child's character is due to the interest it gives which stimulates effort. Play is the best developer of

Grn. Staff Rose University Hospital

altruism. The tremendous friction of a life of restraint on normal activity causes nervous exhaustion, and this feeling is so painful that one readily flies to what removes it, hence inebriety. On the other hand, there is danger in the non-cultivation of inhibition, for impulsiveness then rules, and meets with innumerable inducements to intemperance. It is from these two extreme types that the intemperate are mainly recruited. Another cause conducing to a psychic state favoring inebriety is the impelling by an ambitious or art-loving desire beyond one's endurance, which entails consequent loss of sleep, hasty meals, unsettledness and anxiety, often justified by business oscillations. The fourth type of inebriate differs from the others in being not psychopathic, but the creation of the environment—as in draymen, commercial travelers, our three-bottled ancestors, etc. The number of this class is rapidly diminishing with the spread of knowledge. The problem of preventing these injurious effects must be solved by economists, sociologists and legislatures, occupying themselves with the various factors of the problems pertaining to their respective sciences. But without a precise determination of the psychologic character of the individual against which they must direct their efforts, their labors must be sterile, if not injurious. Each and all must found their procedures on the study of morbid psychology.

3. **Suppurative Ethmoiditis.**—Krauss reports two fatal cases of suppurative ethmoiditis in children. He describes three acute types of ethmoiditis and sums up as follows:

1. There is an increasing conviction that acute suppurative ethmoiditis causing orbital and cerebral symptoms is not so rare a condition as has been thought.
2. It is often rapidly fatal, especially in the young.
3. Indications for operation in acute ethmoiditis are sudden increase in temperature, delirium at night, tumor formation in the inner wall of the orbit, the slightest exophthalmos. Operation should not be delayed too long. As in appendicitis, early operation is a harmless procedure, late operation generally useless.
4. When there is bilateral exophthalmos, operation is generally useless, as the disease has probably extended through the cavernous and circular sinuses, causing a general toxemia and pyemia, or fatal brain lesion.

Boston Medical and Surgical Journal

April 22

8 Case of Infrapubic Cystotomy. Three Cases of Bladder Tumor. B. Tenney, Boston.
9 Intracranial Hemorrhage in the New-born. J. R. Torbert, Boston.
10 *The Luys Urine Separator. Second Report of Forty-One Cases. B. S. Barringer, New York.
11 *Peculiar Form of Family Nervous Disease Resembling Multiple Sclerosis Occurring in Children. I. H. Coriat, Boston.
12 *Vaccines in Typhoid. W. H. Watters and C. A. Eaton, Boston.

10. **The Luys Urine Separator.**—Barringer supplements his first report on this instrument, which was published in the *American Journal of Medical Sciences*, March, 1907 (abstracted in THE JOURNAL, April 20, 1907, p. 1378), with a further record of 27 cases, making 41 in all. Further experience with this instrument extending over three and one-half years, confirms the conclusions of his first paper and leads him to consider the Luys separator only second in point of value to the catheterizing cystoscope.

11. **A Peculiar Family Nervous Disease.**—Coriat describes a peculiar type of nervous disease, observed so far exclusively in children of Russian-Hebrew parentage. The earliest symptoms date from before puberty. The disorder seems to represent a transitional form of nervous disease, related on the one hand to Friedreich's ataxia, and on the other to multiple sclerosis, the symptoms of the latter largely predominating. There was a strong tendency for it to run in families, either in its complete form or as a group of isolated and discrete symptoms. The symptom-complex in all four cases was characterized briefly by a tremor of the hands, increased on voluntary movements, ataxia and marked changes in the reflexes. The knee-jerks were never normal, but were either diminished, absent or exaggerated. Ankle clonus was obtained once and atypical Babinski reflex twice. In two cases the ankle jerks were slight, in a third they were absent. One case showed a transitory spasticity, in another there was an atrophy of the small intrinsic hand muscles with a reaction of degeneration pointing to a bilateral affection of the anterior horn cells in the eighth cervical and first dorsal segments. There was no optic atrophy in any of the patients, and in only one case was a true nystagmus demonstrable. None of the cases showed any staggering or a tendency toward a progressive dementia or loss in weight. In two of the patients there was a moderate degree of feeble-mindedness, but even in these cases the tremor and ataxia can not be interpreted as a form of motor incoordination which is sometimes found in feeble-minded individuals, because the degree of mental weakness was too slight to permit of any such interpretation. The onset in all the cases was a gradual one. In none of the cases was there a history of an immediately preceding infectious illness. A search through the literature failed to disclose any cases that were exactly identical with the author's.

12. **Vaccines in Typhoid.**—Watters and Eaton report a further series of cases of typhoid treated by the hypodermic administration of vaccines made from dead bacilli. The patients were a mother and three children, all attacked at the same time, and infected from another boy, who also came to the hospital. Typhoid was clearly demonstrated in all cases by Widal reaction, leucopenia, lymphocytosis and roseolæ. Vaccines were used on all but the youngest child, who was only slightly ill. The mother and the two children who received vaccines showed immediate abatement of clinical manifestation, and in the children, also, a rapid fall in temperature. The youngest child, however, who was not inoculated, became steadily worse, till on the fourteenth day of the disease the temperature was 104.8 F. It fell immediately with abatement of clinical symptoms on the administration of vaccines. From an observation of forty cases, the authors suggest that the early administration of typhoid vaccine seems able in many cases to shorten materially the duration of the disease or to improve the symptoms and cause it to run a mild course.

Medical Record, New York

April 24

13 *Practice of Medicine as a Career. A. Jacobi, New York.
14 *The Army Medical Service. E. L. Munson, U. S. Army.
15 *The Naval Medical Service. W. H. Bell, U. S. Navy.
16 *The Public Health and Marine-Hospital Service. M. J. Rosenau, Boston.
17 *The Insurance Examiner. H. H. Schroeder, New York.
18 *Railway Surgical Service. C. B. Herrick, Troy, N. Y.
19 *Medical Service in the Merchant Marine. J. F. Donnelly, New York.
20 *Institutional Work for Young Physicians. W. P. Spratling, Baltimore.
21 *Salaried Positions Open to Medical Men in the Larger Cities. W. G. Wood, New York.
22 *Legal Rights and Obligations of the Medical Practitioner. A. N. Taylor, New York.
23 *Postgraduate Study in Europe. G. Mannheimer, New York.
24 *State Medical Practice Laws. R. J. E. Scott, New York.

13 to 24. **Fields of Employment for Physicians.**—Jacobi discusses the conditions, prospects and requirements of private practice. Munson, Bell, Rosenau, Schroeder, Herrick, Donnelly, Spratling and Wood describe the scope, advantages, duties, pay, allowance or other emoluments offered by the various government services and by municipalities, insurance societies, railways, and other institutions to members of the medical profession. Taylor and Scott discuss various phases of the law in relation to the physician and to the practice of medicine. Mannheimer discusses the conditions, expense, localities, etc., of postgraduate instruction in Europe.

Lancet-Clinic, Cincinnati

April 24

25 Antiseptics in Minor Surgery. E. F. Nippert, Cincinnati.
26 Medical Chemistry. E. B. Reemelin, Cincinnati.
27 *A Disregarded Principle in the Action of Mineral Water Applied Externally. C. H. Persson, Mount Clemens, Mich.

27. **Action of Mineral Waters.**—Persson says that in making external therapeutic applications of water we look for physiologic results chiefly, perhaps exclusively, from its reflex and mechanical effect. The surface is connected reflexly with the interior of the body, each portion of the skin periphery being associated through the nerve centers which supply it with nerve filaments, with some visceral periphery or vascular area. The reflex effect of external applications of water to the internal vascular area is similar to, but less in intensity than,

those observed on the vascular area of the skin reflexly associated with it. The mechanical effects of external applications are commonly the reverse to those of the reflex, therefore the fundamental disturbances within the human body, the results of taking a water bath, are dependent on the relative intensity of these reflex and mechanical effects. Irritation of cutaneous nerves gives rise to contraction of the bood vessels of the surface and likewise of the small blood vessels of the interior of the body, simultaneously stimulating the accelerator nerves of both the blood vessels and the heart. The duration of the reflex effects depends on the intensity of the stimulant and of the irritant, and to some extent on the area involved. On *a priori* grounds, therefore, logical reasoning will bring us to the conclusions that if a prolonged continuous irritation is produced, reflex and mechanical effects of the same duration will be established, which would cause within the body disturbances alterative in their nature. Persson calls attention to the fact that this would explain the therapeutic effect of many saline mineral waters.

Medical Fortnightly, St. Louis

April 10

28 *Normal Salt Solution in Septic Conditions of the Peritoneum. J. M. Taylor, Fort Smith, Ark.
29 *Acute Traumatic Tetanus Treated by Magnesium Sulphate. A. P. Heineck, Chicago.

28. Abstracted in THE JOURNAL, Nov. 14, 1908, p. 1726.

29. Published in *Surgery, Gynecology and Obstetrics*, January, 1909, *Chicago Medical Recorder*, February, and *Atlanta Journal Record of Medicine*, February, 1909.

Northwestern Lancet, Minneapolis

April 15

30 Fracture of the Femoral Neck, and Its Treatment. A. S. Rider, Flandreau, S. D.
31 Diagnosis of Joint Disease. A. R. Colvin, St. Paul.
32 Case of Gangrenous Appendicitis. G. G. Balcom, Lake Wilson, Minn.
33 Deformities Resulting from Burns. J. C. Whitacre, St. Paul.

Annals of Surgery, Philadelphia

April

34 Analytic and Statistic Review of One Thousand Cases of Head Injury. C. Phelps, New York.
35 *Rational Treatment of Non-Malignant and Borderline Tumors of the Breast. C. L. Gibson, New York.
36 *Mesocolic or Retrogastric Hernia. W. J. Mayo, Rochester, Minn.
37 Inguinal Hernia of the Cecum. J. B. Carnett, Philadelphia.
38 Hernia of the Appendix. J. A. C. Macewen, Glasgow, Scotland.
39 Cystic Dilatation of the Appendix. J. A. Kelly, Philadelphia.
40 *Prostatic Abscess. S. Alexander, New York.

35. **Borderline Tumors of the Breast.**—Gibson holds that all neoplasms of the breast should be considered malignant until their innocence is proved. The proportion of cancer to other tumors is from 80 to 85 per cent. It is in the relatively simple conditions that seem so clear, chronic or involution mastitis, adenomata, and the several forms of cyst, that the danger lurks, for we may let pass the golden moment when a beginning process, absolutely unrecognizable except for the revelations of the microscope, might have been seized on as a local disease and surely extirpated. Gibson discusses what are dubious or borderline cases, and the question of diagnosis and treatment, and concludes that in younger individuals, up to 30, in the cases devoid of significant features, we may rely on ordinary clinical findings. Past that age it becomes more and more imperative to make the diagnosis certain. Once arrived at the carcinoma age it can and must be made anyhow, as some form of interference must now be the rule, so that, in the later group, the procedures of diagnosis and treatment will be simultaneous, that is, a sufficient exposure of the diseased breast must be made by an incision for the demonstration, gross and microscopic, of its nature. He then recommends and briefly describes the operation of plastic resection of J. C. Warren.

36. **Mesocolic Hernia.**—Mayo reports two cases of interest, not only on account of their rarity, but also because of the primary pathologic condition which appears to have been the important factor in the production of the hernias. Both patients were of the type of build Martin describes as typical in Glénard's disease (*Surg. Gyn. and Obstet.*, December, 1908). The kidney of each was prolapsed, the uterus low and retroverted, and undoubtedly there was in each case a primary prolapse of the stomach. The duodenal ulcer, which existed in both, had undergone a chronic perforation, causing dense adhesions and fixing the duodenum beyond the stomach, just as the cardiac end is held normally by the esophagus. Had the ulcer been the usual type of saddle ulcer of the lesser curvature of the stomach, the hernia could not have occurred, because of the adhesive obliteration of the upper part of the lesser cavity of the peritoneum. The obstruction in both instances was extreme, the huge stomach sagging down in front of the intestines. The patients were emaciated and dehydrated, and for months had been in the habit of emptying the stomach every 24 to 48 hours of a great accumulation of undigested and unpassed food products. The abdominal muscles exerted great force in these violent efforts at vomiting, compressing the intestines behind the stomach, which was fixed at each extremity and greatly prolapsed in its middle part. In this way pressure was brought to bear on the transverse mesocolon upward in the line of least resistance, causing this peculiar form of hernia.

40. **Prostatic Abscess.**—In cases of multiple abscess, instead of the median perineal section and drainage of the abscess into the urethra, as described by him in 1904, Alexander believes that time can be saved and a more perfect cure made by the entire removal of the diseased lateral lobe or lobes by median perineal prostatectomy. Multiple abscesses are much more common than single abscess, and the typical large prostatic abscess is formed by the union of several of these. Operation on a single small abscess will often be followed by subsequent development of another which has been overlooked. Alexander analyzes the results of histologic examination of suppurating prostates removed in this way, and finds that they show progressively the following reason:

1. A purulent catarrhal inflammation, with exudate chiefly within the gland tubules.
2. An interstitial purulent process starting from the tubules invading the surrounding stroma, destroying the tubules and stroma and forming miliary or larger abscesses—the larger abscess being produced by the union of two or more abscesses, caused by necrosis of the intervening tissue.
3. Chronic exudation and productive processes. These are later manifestations of the same progess of inflammation. These processes are characterized by infiltration of the stroma of the prostate with mononuclear cells, the appearance of compact foci of lymphocytes, chronic edema, areas of softening composd of leucocytes, swollen degenerated epithelial cells and other fixed tissue elements, and occasionally of advanced hypertrophy and metaplasia of the tubule cells.

All these lesions are often combined in a single case of prostatic abscess, showing in different portions of the prostate all three stages of the process.

Journal of Infectious Diseases, Chicago

April

41 *Fecal Bacteria of Healthy Men. W. J. MacNeal, L. L. Latzer and J. E. Kerr, Urbana, Ill.
42 *Virulence of Old and Recent Cultures of *Bacillus Pestis*. G. W. McCoy, U. S. P. H. and M.-H. S.
43 Experimental Study of Joint Affections Induced by the Typhoid Bacillus. A. G. Ellis, Philadelphia.
44 *Differential Methods for Detecting the Typhoid Bacillus in Infected Water and Milk. D. D. Jackson, and T. W. Melia, Brooklyn, N. Y.
45 *Proliferation of Epithelium Induced by Sudan III, Scharlach Roth and Paraffin Effects of Roentgen Irradiation on the Same. R. L. Dixon, Ann Arbor, Mich.
46 *Autolysis of the Gonococcus. C. T. McClintock and L. T. Clark, Detroit, Mich.
47 *Immune Bodies in Urinary Infections with Colon Bacilli and Treatment by Inoculation. D. J. Davis, Chicago.
48 *Immunologic and Experimental Studies on Pneumococcus and Staphylococcus Endocarditis. E. C. Rosenow, Chicago.

41. **Bacteriology of Feces.**—In connection with an experiment to determine the influence of cured meats on human health, an elaborate study of the fecal flora of normal adult men was undertaken by directly counting microscopically the number of bacteria in a homogeneous suspension of the feces diluted 1 to 100. The results obtained, which can not be detailed here, form a valuable contribution to the bacteriology of the intestinal tract.

42. **Bacillus Pestis.**—McCoy finds that cultures of the pest bacillus may remain highly virulent for guinea-pigs and white rats after being cultivated artificially over long periods.

44. **Detection of Typhoid Bacillus.**—Jackson and Melia used a medium containing bile and lactose. In this medium the colon bacillus causes much gas and acidity, enough to stop its own growth so far that in the end the typhoid bacillus, which in the mean time multiplies rapidly, becomes the predominating organism. Transplantations in varying dilutions into Hesse agar from lactose–bile inoculated with water or milk and incubated at 37 C.—give rise to characteristic changes when the typhoid bacillus is present. By this method, typhoid bacilli may be isolated from the feces with certainty at any stage of typhoid fever, and Jackson and Melia isolated the bacillus from various sources of drinking water, including the Hudson River.

45. **Epithelial Proliferation.**—Dixon finds that a saturated solution of sudan III in pure olive oil, injected into the skin of rabbits, may cause a simple epithelial hyperplasia about the hair follicles without, however, any carcinomatous infiltration taking place. Roentgen irradiation inhibits this proliferation.

46. **Gonococcus Autolysis.**—In gonococcus cultures autolysis occurs to a marked degree, and the products of this autolysis inhibit effectively the growth of the gonococcus on artificial culture media. The effect their use may have in combating gonorrheal infection in man is to be considered later.

47. **Immune Bodies in Urinary Infection.**—Davis finds that in urinary colon infections the bacteria may vary much in certain details, and that inoculation treatment in such cases should be carried out only with the homologous germ. In the cases so treated by him good results appear to have been obtained. The fact that opsonification, bacteriolysis and agglutination in cases of urinary colon infection do not run parallel, is most readily explained by assuming the existence of specific opsonins, lysins and agglutinins.

48. Discussed editorially in THE JOURNAL, April 24, p. 1336.

Journal of Nervous and Mental Disease, Lancaster, Pa.

April

49 *Case of Sacral Tabes with Necropsy. S. Leopold, Philadelphia.
50 Adiposis Dolorosa Showing Imperfect Development of the Ribs and Vertebræ. G. E. Price, and H. Hudson, Philadelphia.
51 Case of Amyotonia Congenita. T. J. Orbison, Los Angeles

49. **Sacral Tabes.**—Leopold reports a case of tabes in which the Achilles tendon reflex was absent on both sides, and in which there was no Babinski reflex or ankle clonus. The patellar reflex was obtained on each side very promptly, especially in view of the marked wasting of the thigh muscles. The pathologic findings show that the degeneration of the posterior root zone was pronounced through all the sacral segments, and extended as high as the fourth lumbar segment. It was slight at the third lumbar segment, and in the middle thoracic and lower cervical segments only the columns of Goll were involved. The degeneration was throughout more pronounced on the right side and involved the posterior root zone from the fourth lumbar down on the right, whereas on the left side in the corresponding area many normal root fibers entered the posterior horns. In this case, preservation of the patellar tendon reflexes and the disappearance of the Achilles tendon reflexes are satisfactorily explained by the pathologic findings. Ordinarily in tabes the lumbar segments are involved, and the typical symptoms arise, including loss of patellar reflex. In this case the sacral segments showed pronounced degeneration, the lower segments were involved, but the pathway for the reflex are had not been destroyed. The slight involvement of a few of the fibers of the reflex collaterals of the right side corresponds to the finding of a slight diminution of the right patellar reflex.

New Orleans Medical and Surgical Journal

April

52 Where was the Coin? O. Joachim, New Orleans.
53 *Nervous and Mental Effects of Masturbation. E. M. Hummel, New Orleans.
54 Case of Removal of the Gasserian Ganglion. C. W. Allen, New Orleans.
55 *Comparative Study of Blood Culture and the Agglutination Test in Typhoid. E. Lyons, New Orleans.
56 Unusual Case of Infection of Genitourinary Tract, Apparently not Amenable to Vaccine Treatment. C. W. Allen, and C. C. Bass, New Orleans.
57 Antigonococcus Serum. C. Chassaignac, New Orleans.
58 Actions of Certain Drugs on the Blood Vessels. J. B. Guthrie, New Orleans.
59 *Relative Value of Polynuclear Neutrophiles (Leucocytes) in Diagnosis, Prognosis and Treatment of Tuberculosis. W. J. Durel, New Orleans.
60 Dietetic Management of Diabetes Mellitus. I. I. Lemann, New Orleans.
61 Endoaneurismorrhaphy of the Posterior Tibial Artery. W. M. Perkins, New Orleans.
62 Traumatic Aneurism and Arterial Varix. W. M. Perkins, New Orleans.
63 Purpura Hemorrhagica. F. A. Larue, New Orleans.

53. **Masturbation.**—Hummel urges a more clean and candid discussion of this subject, which hitherto has been "jumped on" by religious prejudice. His experience in the female wards of a hospital for mental diseases leads him to the following conclusions:

1. The masturbation of young children is merely a form of specialized tickling without true or major sexual excitement, and practically without morbid results. The habit being most readily acquired by previously neurotic children, cause is often mistaken for effect.

2. The same practice in the adult female partakes usually somewhat of the nature of that of children, as the deeper sexual emotions do not seem to be enlisted in the act. In some women, however, masturbation is a deeply sexual affair. In instances of excessive indulgence certain alterations in the effective character are observed, such as aversion toward the male sex, inability to experience natural libido, morbid fondness for solitude, sensitiveness about matters of sex, and a tendency to attach a sexual significance to irrelevant things, loss of countenance, etc. Sometimes a neurasthenic state with irritable heart and a fear of dying is observed as a consequence of this habit in women.

3. In the male normal sexual indulgence as well as masturbation implies a higher pitch of erethism and a greater expenditure of nervous energy. The climax of excitation in masturbation is higher than in the normal intercourse, and for this reason more of an insult to the cerebrospinal centers. Excessive venery is harmful to nervous health and incompatible with a high order of mental capacity. Masturbators suffer like consequences to a greater extent. Again, psychoneurotic subjects are the only ones likely to carry this vice to such excess as to excite a distinct nervous syndrome. Often in the early stages of a psychosis the subject is observed to take up masturbation, but Hummel is inclined to look on this rather as a symptom. A temperamentally nervous patient can reduce himself to a lower depth of nervous inefficiency by the vice or induce a state of mild dementia.

4. Masturbation, then, may most properly be assigned as a sole exciting cause of some neurasthenic states, certain perversions of normal sexual inclination with more or less functional impotence, and reductions in character tone. The most profound nervous or mental result ever observed by the author as a consequence of masturbation was a profoundly neurasthenic and psychasthenic state with light dementia, in which the patient was so debilitated that he easily succumbed to a trifling intercurrent malady.

55. **Blood Culture and Agglutination Test.**—Lyons, in a preliminary report, details the results of experiments in the Laboratory of Clinical Medicine, Tulane University Medical Department, which lead him to the following conclusions:

1. The work on blood cultures done in this laboratory and the results of others show that the blood culture is the most reliable means of making an early diagnosis in typhoid.

2. If, for some reason, it is impracticable to take a blood culture an ear culture should be done, as its value has been well proved, and it unquestionably comes next to the blood culture in importance.

3. If the above methods are not possible, as when blood is sent into a laboratory for the agglutination test, it is highly advisable, after using the serum for the Widal test, and especially if it be negative, to try Fornet's clot culture, as the chances of making a diagnosis will be considerably increased; and since an early diagnosis in this disease is so important, no methods that appear to be of value should be left untried.

59. **Polynuclear Neutrophiles.**—Dural quotes Arneth's division of polynuclear neutrophiles into 5 classes and describes observations of his own which lead him to suggest the further investigation of this method of blood examination. If in the future it can be shown conclusively that in the normal healthy subject the blood picture shows a greater percentage of two- and three-nuclei cells, and that in the tuberculous the one- and two-nuclei cells predominate, then we shall have a valuable method added to our armamentarium, in the diagnosis, prognosis and treatment of tuberculosis. If in that blood picture we find a shifting from an abnormal to a normal blood picture after the administration of tuberculin, we shall have a valuable guide for the administration of tuberculin, and in this way we shall feel more certain and at ease while administering this valuable product, thus opening for it a broader usage.

Dominion Medical Monthly, Toronto, Canada

April

64 Kraurosis Vulvæ. F. W. Marlow, Toronto.
65 Treatment of Acute Lobar Pneumonia. G. Chambers, Toronto.

Long Island Medical Journal, Brooklyn

April

66 Early Diagnosis of Pulmonary Tuberculosis. S. R. Blattels, Brooklyn.
67 Tuberculosis of the Brain and Its Coverings in Children; Pathology and Diagnosis. L. C. Ager, Brooklyn.
68 *Bacteriologic Diagnosis of Diphtheria. J. E. Blake, Brooklyn.
69 Etiology of Cancer. G. L. Buist, Brooklyn.
70 Cancer of the Uterus. W. B. Chase, Brooklyn.
71 Radical Abdominal Operation for Cancer of the Uterus. C. Jewett, Brooklyn.

68. **Bacteriologic Diagnosis of Diphtheria.**—Blake points out that we have become accustomed to depend on health departments for a bacteriologic diagnosis of diphtheria, and asks whether the report is not often enough incorrect to make us doubtful of its accuracy in any particular case. He reports ten cases in which negative reports were given, and yet the bacillus was subsequently found. He discusses the various possibilities—incompetence, carelessness, absence of bacilli in particular tubes, too few bacilli present to be found, especially in the presence of mixed infection—and discards them all. He concludes that the only explanation lies in a difference of methods of culture. He describes the methods used by the health department and by himself, respectively, and believes that if a double cultural system were adopted, a negative report from a positive case of diphtheria would become an extreme rarity.

Maryland Medical Journal, Baltimore

April

72 *The Present Status of Tuberculosis Work Among the Poor. M. E. Lent and E. N. LaMotte, Baltimore.
73 How the Public Can Help the Medical Profession to Fight Disease (continued). G. M. Linthicum, Baltimore.

72. **Tuberculosis Work Among the Poor.**—Lent and La Motte describe the nature and purpose of the exhibit offered by them at the International Congress on Tuberculosis. The Instructive Visiting Nurse Association of Baltimore was the first district nursing association to place a special tuberculosis nurse in the field, in March, 1904. The general plan of the association's work was as follows:

1. Instruction of the patient in regard to the nature of the disease, the value of food, rest and air, the use and disposal of sputum cups, fillers, handkerchiefs, pockets, disinfectants and the like, supplied by the nurse. Milk and eggs, warm clothing, beds and coverings and such things as may be necessary for carrying out the open-air treatment, provided through charitable agencies.
2. Instruction of the patient's family in regard to the nature of the disease; the necessity for isolating the patient by giving him a separate room, or, if this is impossible, a separate bed; the care of the utensils and clothing used by the patient, and all other necessary points which concern either the comfort and well-being of the patient or the prophylaxis of the disease.
3. Registration with the state board of health of all cases diagnosed; report made to the city health department of all houses or rooms in which tuberculous patients have died, or from which they have been removed, in order that these places may be fumigated.

In the campaign against tuberculosis, as in any other effort to deal with the evils besetting society, the two primary factors to be dealt with are humanity and environment—humanity that creates environment and environment that distorts humanity. It is the inseparability of these factors as they appear in the concrete facts of existence that renders the educational method futile in the conduct of the tuberculosis campaign among the poor. Their mentality, their attitude toward life, their manner of living, their surroundings, all of which are inextricably associated either as cause or effect, or as both, with the very fact of their poverty, absolutely preclude the possibility of their making any effective use of the instruction given them, however nicely this may be adapted to its end or however skillfully and perseveringly followed up. Tuberculosis is primarily a disease of the poor. It is among them that the issue must be fought out. The solution lies in arousing that part of the community of financial standing and intelligence to the necessity for the provision of hospitals so commodious, comfortable and easily accessible to the friends of patients, that removal will be hailed as a blessing by the classes whose poverty renders them helpless alike to save themselves and to protect the community. The article is illustrated.

Colorado Medicine, Denver

April

74 Thrombosis of the Cavernous Sinus Following Mastoiditis D. S. Neuman, Denver.
75 Thrombosis of the Intracranial Venous Sinuses of Otitic Origin. T. J. Gallaher, Denver.
76 Ocular and Orbital Symptoms of Thrombosis of the Cavernous Sinus. E. Jackson, Denver.
77 Immunity in Tuberculosis. W. W. Williams, Colorado Springs.
78 Immunity in Tuberculosis. G. B. Webb and W. W. Williams, Colorado Springs.
79 Causes of Death in the Registration Area of the United States. E. Lawney, Denver.

Buffalo Medical Journal

April

80 From the Patient's Point of View. G. M. Gould, Ithaca, N. Y.
81 Diagnosis of Pancreatic Affections. J. Burke, Buffalo.
82 The Citizen Doctor. E. Munson, Medina, N. Y.
83 *Endothelioma of the Bone Following Injury. G. W. Cottis, Batavia, N. Y.

83. **Endothelioma of Bone.**—Cottis discusses a case, the twenty-fifth on record, in order that this condition may be recognized before it has advanced beyond the operable stage; he emphasizes certain conclusions whose importance is demonstrated by his case and by those previously recorded. These conclusions apply also to the sarcomata.

Malignant changes in the bone marrow or in the periosteum may result immediately from trauma, either slight or severe.

Pain is present early if the neoplasm originates centrally, *i. e.*, in the marrow, or if it begins in the periosteum and early involves a nerve trunk. On the other hand, pain may be entirely lacking and the first symptoms may be spontaneous fracture.

There may or may not be palpable tumor formation.

Malignant disease of the bone marrow is likely to cause a pronounced eosinophilia and may cause a pernicious type of anemia.

The long bones are the ones most often primarily affected. Metastases occur in a majority of cases, their seat being most often in other bones. The next most common sites are the lungs, liver and lymphatic glands, in the order named.

In any case of injury to bone followed by an undue amount of pain, in all cases of unexplained delayed union of fractures, in all cases of palpable tumor of bone, in all cases of spontaneous fracture, a blood analysis should be made. Eosinophilia, with or without lymphocytosis, anemia or the presence of nucleated red cells, points to serious bone marrow trouble. The urine should be examined for Bence-Jones proteid, the presence of which indicates myeloma, and hence contraindicates operative procedure.

Iowa Medical Journal, Des Moines

April

84 Diseases of Joints Following Injuries, Especially of the Hip and Knee. W. Woodbridge, Central City, Ia.
85 Multiple Abscess of the Liver Following Appendicitis. A. G. Burge, Iowa City, Ia.
86 *Choice of Operation for Chronic Inguinal Hernia. W. H. Allport, Chicago.
87 Surgical Preparation. B. L. Eiker, Leon, Ia.
88 Diagnostic Value of the Cystoscope. H. G. Welpton, Des Moines.

86. **Inguinal Hernia.**—Allport endeavors to show where each of the many and diversified operations for chronic hernias of the inguinal region may find special application. He reviews the history of the development of the radical operation for hernia from Czerny's time and tabulates the types of herniotomy and the etiologic classification of hernia. He bases his considerations of treatment on the method of handling (1) the sac; (2) the internal ring; (3) the cord; and (4) the canal and muscle. It is evident that we can hold no single operation as the key to salvation for all hernias.

Texas State Journal of Medicine, Fort Worth

April

89 Sixty Cases of Pus-Tube Operations Without a Death. W. W. Samuell, Dallas.
90 Ophthalmia Neonatorum. J. O. McReynolds, Dallas.
91 Bronchopneumonia. L. L. Harris, Cuba.
92 Dislocation of the Spine. C. A. Gray, Bonham.
93 Postoperative Dilatation of the Stomach. B. C. Eskridge, Houston.
94 Important Details in Laboratory Work. W. F. Thomson, Beaumont.
95 Personal Observations in Latent Malaria. J. W. McLaughlin, Austin.
96 *Chorioepithelioma. A. L. Blesh and C. E. Lee, Oklahoma City.
97 Laparotomy in Tuberculous Peritonitis. W. M. Yater, Cleburne.

96. Abstracted in THE JOURNAL, Nov. 14, 1908, p. 1727.

Interstate Medical Journal, St. Louis

April

98 *Theory of the "Complex." W. A. White, Washington, D. C.
99 Congenital Syphilis in Infants. I. A. Abt, Chicago.
100 *Lupus Erythematosus. M. F. Engman, and W. H. Mook, St. Louis.
101 Primary Abscesses of the Abdominal Wall. M. W. Myer, St. Louis.

98. **The Complex.**—White points out that the term, as used in his article, while comparatively new, does not correspond

to an altogether new idea. It is but the recent German clothing that has hitherto found expression in the term "dissociated state." With the advent of the theory of the complex, however, the study of conditions formerly described as the dissociated states, has led to a considerably broader connotation for the term complex as used to-day than for dissociation. He discusses mind as an adaptive mechanism and its various modes of reaction. He defines the term complex as a constellation of ideas associated together, grouped about a certain event, which event conditions a highly painful emotional state. He describes types of defense reactions of the mind against such complexes by (a) forgetting; (b) the theory of compensation; (c) changes in mental moods, attitudes, character, etc. He discusses various modes of the complex, and finally says:

> The main conclusions to which his paper tends are that the operations of the mind are never fortuitous—if we ever see mental events that have no efficient cause it is only because we are not in possession of all the facts. Ideas neither arise spontaneously nor do they exist without having established relations with other ideas—again because of a good and sufficient reason. The relationships thus established are brought about and cemented by the emotional content of the event which brings them together, and they bear thus a relation of interdependence as among themselves—they are constellated. These constellations exist as the mental counterparts of events and correspond to experiences which have emotional content. Thus do our sorrows and our pains, our longings and our desires, in fact, all of the springs for action, exist as organized though submerged groups of ideas which, from behind the scenes, as it were, direct our conduct.

100. **Lupus Erythematosus.**—Engman and Mook report six cases of lupus erythematosus, to illustrate some of the many unique phases of the disease. It expresses, if any disease of the skin does so, some constitutional derangements, most marked and spectacular, in the acute, fulminating, disseminated types of the disease which show coincidentally signs of visceral involvement. Lupus erythematosus remains a mystery in its etiology and disappointing in therapy. Modern study points to some constitutional derangement or to toxemia as cause. This, however, may be only predisposing, and the fixing of a chronic inflammatory process called lupus erythematosus may necessitate an external or exciting factor like an erysipelas, burn, trauma, frostbite, exposure to heat, sun, wind; or an inflammatory disease, of which eczema may be taken as a type.

Kansas City Medical Index-Lancet

April

102 Diagnosis of Friedreich's Disease. F. C. Neff, Kansas City.
103 Cutaneous Tenderness in Appendicitis. J. G. Sheldon, Kansas City.
104 Chronic Desquamative Nephritis. W. C. Abbott, Chicago.

Albany Medical Annals

April

105 *Psychotherapy. H. Hun, Albany.
106 *The Paravertebral Triangular Area of Dulness in Pleural Effusions (Korányi-Grocco Sign). H. C. Gordinier, Albany.
107 State Ownership of the Head Waters. C. G. Rossman, Hudson, N. Y.

105. **Psychotherapy.**—Hun discusses the subject historically and at large, and devotes particular attention to Eddyism and the Emmanuel movement. His explanation of the acceptance of the basic statements of Mrs. Eddy's book by persons of good education and more than ordinary intelligence in other matters, is that our religious leaders and guides have for so many centuries forbidden us to use our reason in such matters, and have accustomed, and even compelled us, to accept incredible things by faith, that they have prepared a favorable soil for Mrs. Eddy's doctrines. The wonderful cures reported under both Eddyism and Emmanuel movement and other forms of mental healing, he says, are not strange to a physician. Such rapid and complete cures are constantly occurring in ordinary medical practice. He has himself seen paralyses of long standing disappear under a treatment sometimes of five minutes' duration, sometimes of five days'.

106. **The Paravertebral Triangle.**—Gordinier cites Korányi's works to show that he anticipated Grocco in calling attention to what is now known as "Grocco sign," by some five years, though he sees no reason to doubt the absolute independence of Grocco's discovery. He proposes that it be called the Korányi-Grocco sign. He reviews the literature of the subject and reports a case with autopsy findings. He holds that in view of the autopsy findings this case proves that the presence of a typical paravertebral triangular area of dulness may, as has been shown by Smithies and Ewart, be due to extrathoracic disease. It also shows that while the Korányi-Grocco sign is of greater diagnostic value in the recognition of pleural effusion, it is by no means pathognomonic. He draws attention to the fact, repeatedly verified by him, that in massive pneumonias a dulness over the lower spine exists, producing an area of dulness parallel to the spine, but not of a triangular shape. Korányi, in a recent article on this subject, also refers to this fact, and emphasizes the distinction between it and the triangular area of dulness so characteristic of pleurisy with effusion.

Journal South Carolina Medical Association, Greenville

April

108 The Religious Press and Quackery. R. E. Hughes, Laurens.
109 Cases Illustrating the Diagnostic Value of *X*-Rays. R. W. Gibbes, Columbia.
110 Medical Ethics. F. L. Potts, Spartanburg.
111 Advantages of Organization. W. H. Dial, Laurens.
112 Acute Otitis Media. E. W. Carpenter, Greenville.
113 The Great White Plague. O. B. Meyer, Newberry.

Cleveland Medical Journal

April

114 *Modes and Sources of Infection in Tuberculosis. M. P. Ravenel, Madison, Wis.
115 The Medical Expert. T. A. Burke, Cleveland.
116 Eclampsia. E. O. Houck, Cleveland.
117 Bismuth Injections for Treatment of Old and Secreting Fistulas. W. G. Stern, Cleveland.
118 Medical Cleveland in the Nineteenth Century (continued). H. E. Handerson, Cleveland.

114. **Infection in Tuberculosis.**—Ravenel divides his subject into two main propositions: (1) The modes of infection, and (2) the sources of infection. He details experiments to show that tubercle bacilli not only penetrate the intestine, but reach the lung within the period of digestion. He discusses the statistics from various parts of the world with reference to intestinal primary tuberculosis, and concludes therefrom that it can not be upheld that primary intestinal disease is a rare or negligible quantity, as Koch asserts. A consideration of the statistics forces one of two conclusions on us: First, that pathologists find primary intestinal tuberculosis when their attention is directed to a careful examination for it; or else that the weight of Koch's authority, when he said in 1901 that there was no danger of transmission from cattle to man, led to carelessness in the use of milk, and that the death rate from this form of tuberculosis has consequently increased. With our present knowledge, however, Ravenel does not think that we can deny that respiratory infection is responsible for the greater number of cases of tuberculosis. We must admit that man is the greatest danger to man, but the danger to man from the milk of tuberculous cattle must also be considered. He discusses the transmission of bovine tuberculosis to man, and while the proportion of cases due to the bovine germ can not be fixed, it is certainly far from insignificant. It is almost certain that the bovine tubercle bacillus changes in the human body, so that its characteristics can not be recognized. It has been definitely proved that the mammalian bacillus can be changed into the avian bacillus, the differences between which are much greater than those between the human and the bovine. He believes that the evidence proves conclusively that the digestive tract, as a portal of entry for the tubercle bacillus, is much more important than has been heretofore supposed, even though, for the present, we must acknowledge that the respiratory tract is the chief avenue of invasion.

Northwest Medicine, Seattle, Wash.

April

119 Surgical Complications of Typhoid. S. W. Mowers, Tacoma, Wash.
120 Senile Cataract. R. L. Nourse, Boise, Idaho.
121 Lymphoid Tissue. F. J. Van Kirk, Bellingham, Wash.
122 *Relation of the Pathologist to the Clinician. W. S. Griswold, Seattle.

122. Discussed editorially in this issue.

Journal of Ophthalmology and Otolaryngology, Chicago

April

123 Postgraduate Medical Instruction in Vienna. A. E. Davis, New York.
124 Physiology of the Cochlea in Relation to Tone Perception. G. E. Shambaugh, Chicago.
125 Spontaneous Recovery from Apparent Lateral Sinus Infection. E. C. Ellett, Memphis, Tenn.

Journal of the Medical Society of New Jersey, Orange

April

126 *Resuscitation of Persons Shocked by Electricity. E. A. Spitzka, Philadelphia.
127 The Uterine Curette: Its Uses and Dangers. C. L. DeMerritt, West Hoboken.
128 Penetrating Wounds of the Abdomen. W. P. Glendon, Cedarville.,
129 Psychoneuroses of the Motor Car. W. Dodge, Orange.
130 Importance of Studying the Conditions of the Heart Muscle in Various Diseases. H. A. Hare, Philadelphia.
131 Value of the *X*-Rays in Chest Diagnosis. A. L. Gray, Richmond, Va.

126. **Treatment of Shock by Electricity.**—Spitzka refers to the danger of fatal electric shock due to the increasing use of electricity as an industrial agent. He describes the mode of execution by electricity and the pathologic findings on autopsy. Death by electricity may be preponderatingly due to heart paralysis, with fibrillary contractions of this organ, or to asphyxia, or both combined. The cessation of respiration is a secondary phenomenon, though usually simultaneous with the cessation of normal heart action. In cases of good contact, however, with a high tension current, there may be no heart paralysis, but only respiratory failure, and in such cases respiration may be re-established spontaneously or artificially. The prognosis is good only in cases in which there is some heart action and respiration, the former particularly. The stricken individual must, of course, be taken out of the circuit if he be not already freed from it. Bystanders can do this with rubber gloves, or with hands wrapped with thick, dry, woolen material, by pulling at the victim's clothing, by sticks of wood, or, if in contact with a wire, this may be cut with a nipper with insulated handles. This must be done with caution, as the momentary arc formed between the separated ends may blind the rescuers.

The patient should be laid with the head a little higher than the body, and artificial respiration be begun promptly by compressing the thorax about 18 times a minute, with the hands applied flat to the sides and lower part of the chest. The tongue must be drawn forward. Massage over the heart, faradization, the electrodes applied to the neck and heart region, or adrenalin injection by Crile's method, may be used to stimulate heart action. The epiglottis may be tickled with the forefinger. Other methods that have been suggested are lumbar puncture, venesection, the application of the Leduc current and in the last resort a high tension shock of short duration.

Ophthalmology, Seattle, Wash.

April

132 Arteriosclerosis as a Factor in Obstruction of Central Retinal Vessels. P. Fridenberg, New York.
133 Prealbuminuric Retinitis. H. H. Martin, Savannah, Ga.
134 Intraocular Disease Brought on by Disease of Nasal Sinuses. H. Gradle, Chicago.
135 Fibroma of the Sclera. E. H. Oppenheimer, Berlin, Germany.
136 Membranous Conjunctivitis with Systemic Complications. H. F. Hansell, Philadelphia.
137 Treatment of Corneal Ulcers. J. A. Donovan, Butte, Mont.
138 Amaurotic Family Idiocy. B. E. Fryer and J. S. Lichtenberg, Kansas City, Mo.
139 Practical Relation Between Refraction, Accommodation, Age and Occupation. F. B. Eaton, Portland, Ore.
140 Dependence of Ophthalmology on Other Branches of Medicine. J. Green, St. Louis.
141 Sympathetic Cyclitis with Complete Recovery. T. H. Butler, Coventry, Eng.

Alabama Medical Journal, Birmingham

April

142 New Instruments of Use in Surgery of the Nose and Throat. E. Pynchon, Chicago.
143 Spectacle Fitting in Ophthalmology. S. L. Ledbetter, Birmingham.
144 Duodenal Circle—(Arcus Duodenalis). B. Robinson, Chicago.
145 Pellagra. C. M. Rudulph, Birmingham.
146 Treatment of Pneumonia. E. P. Lacy, Bessemer.
147 Cancer of the Uterus. E. Lanphear, St. Louis.
148 Dr. Bryan Watkins Whitfield. J. D. S. Davis, Birmingham.
149 Progress in Collecting Vital Statistics. E. H. Sholl, Birmingham.

University of Pennsylvania Medical Bulletin, Philadelphia

April

150 *Surgical Treatment of Trifacial Neuralgia, including a Series of 23 Intracranial and 15 Extracranial Operations with One Death. C. H. Frazier, Philadelphia.
151 Tuberculosis of the Appendix. G. P. Müller, Philadelphia.
152 Pure Adenoma of the Breast. J. Speese, Philadelphia.
153 Prevention of Postoperative Adhesions Between the Cortex and Dura. F. Prime, Philadelphia.

150. **Operation for Trifacial Neuralgia.**—Frazier says that according as we are dealing with a minor or a major neuralgia, a peripheral or central operation will be called for. The technic of these has been well-nigh perfected; the physician should no longer harbor the traditional dread and fear of operation on the Gasserian ganglion. Too often the operation is put off until the patient is addicted to the morphin habit, depleted in strength and vitality by drugs, sleepless nights and years of intense suffering. The Gasserian ganglion is easily exposed, hemorrhage and shock need no longer be considered elements of danger; death from shock or from hemorrhage does not occur in experienced hands; the risks of operation are only those associated with any other major procedure. Recovery from the effects of the operation is rapid; the patients are frequently up and about on the third or fourth day, and the ultimate results are, to say the least, most gratifying both to patient and operator. Frazier knows of no other surgical procedure which, from every point of view, offers a greater and more permanent measure of relief. He describes the operation in detail.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London

April 10

1 *Disorders of the Cerebral Circulation and Their Clinical Manifestations. A. E. Russell.
2 Etiology of Acne Vulgaris and Its Treatment by Vaccines. A. Fleming.
3 *Physiologic and Therapeutic Properties of Serum of Milk (Lacto-Serum). R. Blondel.
4 Treatment of Exophthalmic Goiter with Milk of Thyroidless Goats. W. Edmunds.
5 Radiography as an Aid to the Diagnosis of Diseases and Injuries of Skull and Brain. R. Knox.
6 Tuberculin Therapy. A. J. Landman.
7 Cerebrospinal Fluid in General Paralysis and the Nervous Lues. G. S. Williamson.

1. **Disorders of the Cerebral Circulation.**—In the second Goulstonian lecture Russell discusses the correlation between the circulatory changes postulated as the precipitating factor in the epileptic fit and the various symptoms of, and the recovery from, the attack. Under this head he discusses the aura, unconsciousness, convulsions, the physiologic mechanism from recovery underlying epileptic fits, and postepileptic phenomena. He considers vasomotor spasm in the brain as a cause of epilepsy and discusses *petit mal*, infantile convulsions, and Jacksonian convulsions. He describes the symptoms following on prolonged and cerebral anemia as well as similar symptoms resulting from prolonged chloroform syncope.

3. **Lacto-serum.**—Blondel describes experiments made with the lacto-serum of cow's milk, which possesses some very interesting properties. As regards its saline constituents it behaves like a solution in which sodium chlorid, milk sugar, and phosphates of the alkalies and alkaline earths predominate. As regards its ferments, it has a resemblance to extracts of animal organs and to animal serums; like them, it contains certain oxydases, the importance of which is only beginning to be known, and which impart to all serums several properties in common. He next discusses the ferments of milk, and says that the practical results observed in the use of sterilized milk deprived of its ferments seem to show that the latter are of only secondary importance when the milk is introduced into the digestive tract. When the milk is converted into lacto-serum, however, and this is injected into the skin, the specific action of the ferments is pronounced. He describes the effect of the injections and points out as a distinct and peculiar phenomenon belonging specially to this serum, a notable lowering (or what might be more correctly called a "regularization" of the blood pressure in the

arteries and capillaries). Therapeutically, he has used lacto-serum in puerperal infections (results variable); postoperative peritonitis (unsuccessful; there was evident prolongation of the patient's resistance, but a fatal issue was not averted); typhoid fever (one remarkable result but of doubtful interpretation; three cases no result); pneumonia (results every way remarkable and constant, defervescence always setting in after the second injection, or even after the first); arterial hypertension in arteriosclerosis. In this last condition lacto-serum has its most interesting application. A fall of blood pressure and mitigation of the general symptoms ensued. It was noted that several of the patients treated for the last-named condition had albuminuria, which was always somewhat increased during the first days of treatment. If the albuminuria depends on hypertension alone it disappears quickly and permanently in patients who persevere with the treatment, but if renal lesions are present the albuminuria, after the initial increase returns to its original amount. This supplies a convenient method of distinguishing between the albuminuria of hypertension and true organic albuminuria. Blondel describes his method of administration—a daily injection of 10 c.c., repeated in twenty-four hours if the effect has not been sufficient, until the blood pressure has fallen to normal—and also the preparation of the lacto-serum.

British Medical Journal, London

April 10

8 *Paralysis of the Movements of the Trunk in Hemiplegia. C. E. Beevor.
9 *Traumatic Heart Disease and Compensation for Accidents. L. E. Shaw.
10 Treatment of a Case of Extensive Infantile Paralysis by Operation and Apparatus. R. P. Rowlands.
11 *Nerve Sheath in Causation and Treatment of Neuralgia. R. M. Simon.
12 Aural Vertigo. W. S. Syme.
13 Lead Poisoning in Childhood. A. J. Turner.
14 Crossed Paralysis. G. Lambert.

8. **Paralysis of Trunk Movements in Hemiplegia.**—Beevor essays to show that in some cases of hemiplegia—let us say left—the trunk muscles of each side act weakly when they take part in left-sided movement and the same muscles act normally when they take part in right-sided movement; also that the movements of the trunk requiring bilateral action of muscles are very little or not at all affected. He discusses the question of the change in representation of one and the same group of muscles from one hemisphere to the other accordingly as they act in right-sided or left-sided movements; and also the question of movements requiring bilateral action of muscles in one or both hemispheres. He describes a case of hemiplegia in which certain movements of the trunk were defective, so that, among other defects, the patient fell toward the hemiplegic side in trying to sit up. He analyzes the muscles which take part in these defective movements and compares these voluntary movements with those produced by morbid conditions in man, or elicited by cortical electric stimulation in animals in reference to representation of the movements in one or both hemispheres, and he describes the methods of ascertaining these defective movements in man. The movements which we must ask the patient to perform must be unilateral, for the bilateral movements are less liable than the unilateral movements to be paralyzed in hemiplegia. The unilateral movements consist in abduction from the midline to the right and left, adduction from the right and left to the midline, and rotation of spine with the face turned to the right and then to the left. All these movements should be tested with and without resistance, which should be applied by the hand of the observer against the patient's shoulder, and also both in the position of lying down and in that of sitting up in bed when this is possible; and particular notice should be taken in the latter position whether or not the patient is unable to prevent himself falling to one side.

9. **Traumatic Heart Disease.**—Shaw points out that with the increasing tendency toward insurance against accidents, the possibility of an injury being the cause of a disease concerns the profession of to-day more than ever before. He divides traumatism of the heart into three classes: (1) Those with obvious external injury, as in wounds, crushing of the thorax, etc.; (2) those in which there is a disruptive lesion of the heart which is certainly not due to external violence—a patient is found dead with blood in the pericardium and the heart torn, generally in such cases disease of the heart muscle may be found; (3) cases of laceration of the valve and great distention of the cavity consequent on some fierce strain, in which the patient survives the injury, thereby differing from the other two classes in which he has not survived. In this last class the heart may have been previously healthy or there may have been antecedent disease. Shaw discusses the professional difficulties connected with this increasing tendency of the community to insure against the results of accidents. To the previously existing duties of seeking out the causes of disease, inducing reluctant patients to put preventive measures into effect, and of curing the patients when sick, there has now been added a totally new duty, that of holding the balance even between conflicting pecuniary interests, the just settlement of which can be determined only by the aid of medical knowledge. He gives several illustrative cases and asks careful consideration of the question, because it seems likely that if the work of deciding these pecuniary interests continues to be carried on as at present, it must lead to a degradation of the profession in the eyes of the public. To meet the difficulty of conflicting medical opinion under such circumstances, he suggests that the profession should insist on being, and being regarded as, arbitrators and not advocates. It should not be impossible to set up a special tribunal to deal with those questions, in which independent medical men with special experience should act in a judicial capacity as arbitrators or assessors to a legal arbitrator. Another means would be to substitute an insurance against invalidity of all sorts for that against the result of accident. He points out, also, that we should now recognize that as a profession our peculiar relations are necessarily somewhat different in regard to those persons who are insured and those who are not. Formerly, incapacitation of any bread winner rendered him at once a suitable object for charity, but since insurance became common it becomes a doubtful question whether the medical profession should give their services without payment, in order to save the insurance companies from the responsibility of paying their agreed liabilities. Finally, the author makes an earnest plea for the support of medical organization.

11. **The Nerve Sheath in Neuralgia.**—Simon says that it is not sufficiently recognized that the pressure, which is such an important factor in neuralgia, may arise, not only from outside, but from changes within the perineurium, due first, to the extension of inflammation from surrounding tissues; second, to such toxic conditions of the blood as have a tendency to cause proliferation of the connective tissue in the immediate neighborhood of blood vessels, as in chronic alcoholism; or third, to acute congestion of blood vessels in the sheaths of the nerves, as often occurs in influenza. While morphologically it may be true that there is no such thing as a nerve sheath in the sense that there is no separate structure which can be clearly defined and exhibited, it is nevertheless the case that the connective tissue which forms a nerve sheath is continuous externally with the connective tissue outside it, and that from its inner surface fine trabeculæ of connective tissue extend to form a protective covering between and round the myelin and axis cylinders of the nerve element. Blood vessels are carried on all these connective tissue structures, and it is on the congestion of these vessels that Simon believes pain to depend. He quotes two cases in which tough red adhesions were found between the sheath and nerve, and, after breaking them down, the nerve was stretched inside the sheath. The result was entirely successful.

Medical Press and Circular, London

April 7

15 Duodenal Ulcer: Its Diagnosis and Surgical Treatment. J. Sherren.
16 Three Cases of Malignant Disease of the Nasopharynx. W. Stuart-Low.
17 Myasthenia Gravis. W. B. Warrington.
18 *X-Ray Treatment of Tuberculous Glands. A. H. Pirie.

18. **Tuberculous Glands.**—Pirie says that the effect of an efficient dose of *x*-rays in cases of tuberculous glands may be twofold: (1) It may raise the opsonic index from below normal to normal; (2) it may kill giant cells which are forming. The first change is not sudden, like that following injection of tuberculin. With regard to the second change, he points out that those cells most easily killed in the human body are those that grow quickly, *e. g.*, the reproductive cells at the hair roots and in the testicle. It has been shown that giant cells at one period grow quickly and are therefore easily killed. He describes the method and dose of *x*-rays used and concludes that tuberculous glands in the neck can be successfully treated, both before and after they have broken down. The best time to begin treatment is when the glands are growing larger. On two occasions he has seen a fluid gland become absorbed without opening on the surface. Usually when a gland has become fluid it opens on the surface and heals in a month when *x*-ray treatment is going on. Rather than let the gland burst when it is fluid, he intends, when he finds a case, to aspirate the fluid aseptically and go on with *x*-ray treatment. The contents of the gland are sterile and their removal must occur before healing takes place. The cosmetic effect when *x*-ray treatment is begun, is excellent, as no scar is left. The glands shrink to small, hard nodules of scar tissue, which remain under the skin, do no harm, and are not visible, though they may be felt. Tuberculous glands often disappear spontaneously; and while in his cases, he says, he may have done little good, he has always been careful to do no harm.

Clinical Journal, London

April 7

19 Venous Thrombosis. F. de H. Hall.
20 Operation for Breast Cancer. W. S. Handley.
21 *How to Preserve the Pupil when Operating for Cataract. C. B. Taylor.

21. **Cataract.**—Taylor refers to cases of cataract which showed no trace of operative interference, in which there was no pain either during or after operation, and in which there was restoration of excellent sight in patients of very advanced age. In some cases the patients were able to read without glasses. When operating, he stands behind the patient, who is reclined, and almost invariably uses artificial light. The eyeball is fixed with a little spear-shaped instrument, the "*pique de Pamard*," which gives control with far less traumatism than that attendant on the use of ordinary fixation forceps. He then enters the point of a trowel-shaped knife in the cornea close to the sclerotic at the base of the flap, which, when completed, will comprise one-half of the cornea. The knife is then pushed quickly across the anterior chamber until it emerges at a counter puncture similarly placed, is sawed rapidly upward, and then turned forward so as to complete the section in the upper border of the cornea; the capsule is then freely lacerated through the natural pupil and the lens extruded by slight pressure at the lower border of the cornea. He denounces as mistakes the ideas that iridectomy prevents prolapse of the iris, permits of complete evacuation of the cortical débris or that a preliminary iridectomy prevents subsequent glaucoma. There are patients whom it is possible to treat effectually under the influence of subconjunctival injections of potassium iodid and judicious dilatation of the pupil.

Journal of Tropical Medicine and Hygiene, London

April 1

22 *The Hereditary Factor in Disease and Its Importance in the Selection of Candidates for Foreign Work. T. N. Kelynack and G. B. Price.
23 Relapsing Fever in Tangier. G. R. Breeze.
24 Remarks on Drs. Breinl and Hindle's Paper on "A New Porocephalus." L. W. Sambon.
25 Hill Diarrhea. A. G. Newell.

22. **The Hereditary Factor in Disease.**—Kelynack and Price undertook a collective inquiry among medical officers of missionary societies, in reference to the bearing of heredity in the selection of candidates for foreign work, and emphasize the following points as a result of the analysis:

Class 1.—Candidates whose family history should determine their refusal: (a) insanity and well-marked neuroses, including epilepsy in one or both parents, should be a bar to acceptance, even when the candidate appears physically and mentally sound; (b) family syphilis should always be considered an adequate cause for rejection.

Class 2.—Candidates for whom a select field should be chosen: While a family history of tuberculosis may call for (a) postponement of the application of the candidate until 27 or 30 years of age, or (b) rejection, if the candidate is himself a "borderline" case, for not a few it would seem justifiable that the candidates should be allowed to work under regulated conditions of life in a carefully selected field.

Class 3.—Candidates whose unfavorable family history may not be considered as a bar to foreign service: A history of short life in the family—unless due to tuberculosis—cancer, adolescent diabetes, gout, rheumatism, fever, and deafness in several members of the family, unless the candidate is a "borderline" case. A family susceptibility to infectious disease, tuberculosis excluded.

Indian Medical Gazette, Calcutta

March

26 Sanatorium Treatment of Tuberculosis. T. H. Delany.
27 Tubercle of the Lungs in Bengal Jails. J. Mulvany.
28 Katatonia in India. G. F. W. Ewens.
29 Antiseptic Surgery in Frontier Warfare. A. E. Berry and R. C. MacWatters.
30 Bites of the *Echis Carinata*. W. E. Monerieff.
31 A Year's Abdominal Surgery. W. J. Wanless.
32 An Outbreak of Mumps. J. K. Sen.
33 Occurrence of Accessory Lobules of the Spigelian Lobe of the Liver. V. E. H. Lindesay.

Annales de Gynécologie et d'Obstétrique, Paris

March, XXXVI, No. 6, pp. 129-192

34 Fibromas of Lower Segment of Uterus. G. Fieux.
35 Congenital Fetal Endocarditis. R. Lefour and G. Fieux.

Annales de l'Institut Pasteur, Paris

February, XXIII, No. 2, pp. 97-176

36 *Cutaneous Parasites—Acari—and Cancer. (Acariens et cancer.) A. Borrel, Gastinel and C. Gorescu. Id. and Leprosy. A. Borrel.
37 Protecting Properties of Serum of Animals with Chronic Trypanosomiasis. Races Resisting this Serum. F. Mesnil and E. Brimont.
38 Behavior of Precipitins of Antivenom Serum with Cobra Venom. A. Calmette and L. Massol.
39 Research on Anaphylaxis. VI. (De l'anaphylaxie lactique.) Besredka.

36. **Acari and Cancer.**—Borrel thinks that the occurrence of spontaneous cancer in certain houses, streets and cages suggests the possibility that the virus causing the malignant disease may be carried by some cutaneous or other parasite from one subject to another. He has discovered helminths, mites, especially acari, in the depths of cancers on rats and nematodes in the circulating blood of mice with lymphomas, and has recently found acari present in a number of cases of cutaneous cancers in the clinic. He gives a detailed and illustrated description of twelve patients with superficial cancer in the depths of which he found numerous acari. The almost constant presence of the parasites in the follicles just undergoing cancerous transformation is certainly suggestive, and he urges others to search for them, especially in incipient epitheliomas, to determine whether their presence is the rule or was merely a coincidence in his cases. The presence of the acari in the follicle leads to hypertrophy of the sebaceous glands and the tumors develop preferably at such points. He found acari on numbers of other inmates of the hospital, free from cancer, but never in such numbers as in the cancer cases. In the young the parasites never had invaded the sebaceous glands. He found the acari also in cases of mammary cancer, and constantly present in mouse cancers. He is convinced that the ectoparasites for the skin and endoparasites for the internal organs certainly have something to do with cancer, either by transporting the virus or by favoring infection, and advises measures to destroy acari as an important aid in the prophylaxis of both cancer and leprosy, both for the persons affected and the contacts.

Annales de Médecine et Chirurgie Infantiles, Paris

March 15, XIII, No. 6, pp. 181-216

40 *Tumor of Cerebellum in Girl of 10. (Nouveau cas de tumeur du cervelet chez l'enfant.) E. Gaujoux and W. Mestrezat.
41 *Cerebrospinal Meningitis of Eleven Months' Duration. Recovery. M. R. Debré.

April 1, No. 7, pp. 217-252

42 *Atypical Forms of Tuberculous Meningitis in Children. E. Gaujoux and A. Juséphovitch.
43 Points of Physical and Moral Hygiene for Children. Foveau de Courmelles.

40. **Cerebellar Tumor in Child.**—This is the second case of cerebellar glioma in a child reported by Gaujoux with microscopic examination. In this latter case the first symptoms were observed five years before the fatal termination. The

tumor had been diagnosed as a tuberculoma on account of existing tuberculous processes elsewhere; there was no external hydrocephalus, but the internal was sufficient to explain the vomiting, blindness, etc. Puncture relieved the headache and vision each time temporarily, but the case was too far advanced when first seen to permit of durable improvement. As the atony of the muscles increased and spread, the reflexes became exaggerated—a sign of location only observed, he thinks, with a cerebellar tumor. The cerebrospinal fluid was free from evidences of reaction on the part of the meninges. The tumor was extremely vascular, almost erectile, which explains the abrupt and considerable fluctuations in the intensity of the symptoms observed.

41. **Cerebrospinal Meningitis of Eleven Months' Duration.**—Debré's patient was a girl of 8 and afebrile periods with subsidence of symptoms occurred from time to time, sometimes lasting for three weeks, after which the symptoms flared up again. This prolonged type of meningitis is liable to be accompanied by intense emaciation, of which this case was a typical example. Complete deafness developed a few days after the first onset of the disease, as also epileptoid tremor, exaggeration of the reflexes and rigidity, with vasomotor and trophic disturbances, but all these symptoms proved to be curable in time; even the deafness showed signs of improvement by the end of the year. Lumbar puncture was done three times; the cerebrospinal fluid contained a large proportion of albumin with numerous misshapen polynuclears and a few lymphocytes, but no micro-organisms could be detected. Treatment included tepid baths, guaiacol inunctions and administration at times of pepsin and hydrochloric acid to aid digestion and Debré ascribes the final recovery partially to these measures.

42. **Atypical Forms of Tuberculous Meningitis in Children.**—Gaujoux classifies these abnormal forms as the acute, apoplectic or fulminating type, those characterized by local symptoms depending on the seat of the tuberculous neuro-meningeal process, and those characterized by the preponderance of a single symptom, such as somnolency or delirium or a cluster of symptoms apparently with no causal connection, suggesting influenza, indigestion or typhoid, or combined with some intercurrent affection. He reviews the literature on these atypical forms, citing examples of each. In Hutinel's case the syndrome at first was that of bilateral sciatica, with numbness in the limbs followed by paralytic impotence. The temperature then began to go up and the child died with symptoms of basilar meningitis. In Gaujoux's own experience a typical case of the spinal form of tuberculous meningitis was accompanied by retention of urine and abolition of the knee-jerk and ankle clonus. The principal varieties in the third group are the somnolent, the delirious and the gastro-intestinal forms. The somnolent form may be observed in children of all ages and may or may not be accompanied by headache, vomiting, constipation, spasm of the larynx, hemiplegia or diarrhea. In one case the somnolency was the only symptom for a month before general rigidity was observed which proved transient; but the somnolency continued and the child died with scarcely any further characteristic symptoms. The mental form may present merely delirium or hallucinations and the typhoid form may simulate the early stages of typhoid fever. In one such case a girl of 13 died in eight days after the onset of typhoid symptoms, malaise, the typhoid expression, coated tongue, distended abdomen, temperature 104 F. and pulse of 120, with bronchitic râles and diarrhea. Autopsy revealed entire absence of typhoid lesions but unmistakable signs of typical tuberculous meningitis.

Archives de Médecine des Enfants, Paris

March, XII, No. 3, pp. 161-240

44 Rôle of Human Contagion in Tuberculosis in Children. J. Comby.
45 Influence of Health of Cows on the Food Value of Their Milk. (Influence de l'état de santé des laitières sur la valeur du lait alimentaire.) M. Moussu.
46 Paravertebral Triangular Area of Dulness in Serofibrinous Pleurisy in Children. (Sur le signe de Grocco-Rauchfuss-Hamburger dans la pleurésie sero-fibrineuse chez l'enfant.) J. Brudzinski.

April, No. 4, pp. 241-320

47 *"Crest" Kyphosis. (Cyphose à crête épineuse.) M. Nageotte-Wilbouchewitch.

47. **"Crest" Kyphosis.**—Mme. Nageotte-Wilbouchewitch calls attention to a peculiarly obstinate form of kyphosis characterized by the prominence of three or four spinal processes standing out like a small crest, generally at the sixth and seventh dorsal vertebræ, but sometimes lower down. The spine is always stiffer than usual at this point and the protruding crest can not be reduced without suspension and extension; these succeed, although the curvature returns almost as soon as the restraint is removed. The protruding crest is the keystone of an extensive curvature involving a large part of the spine, and unless corrected in time, the deformity increases with age. This "crest" may be observed as early as the third or fifth year. The "crest kyphosis" is frequently encountered in the different members of a family. It is important to recognize it early in order to institute appropriate measures at once.

Bulletin de l'Académie de Médecine, Paris

March 23, LXXIII, No. 12, pp. 347-375

48 Operations on the Stomach. (Chirurgie de l'estomac.) A. Poncet, X. Delore and R. Leriche.
49 Familial Cystic Epitheliomas on Genitalia. M. E. Kirmisson.

March 30, No. 13, pp. 376-421

50 Aneurism of the Aorta Simulating Hypertrophy of the Heart. Boinet.
51 Pulsating Cancer of Sternum and Ribs Simulating Extrathoracic Aortic Aneurism. Id.

Revue de Gynécologie, Paris

XIII, No. 1, pp. 1-176. Last indexed March 20, p. 1000

52 Fetation in a Rudimentary Accessory Horn of the Uterus. (La grossesse dans la corne accessoire rudimentaire ou atrésique de l'utérus bicorne unicervical.) M. Cohn.
53 Angioma of the Spleen. (Angiome de la rate.) A. Martin.
54 *Spontaneous Perforation into the Bladder of Tuberculous Process in the Adnexa. (Ouverture spontanée dans la vessie des pyosalpinx tuberculeux.) H. Violet and A. Chalier.
55 Torsion of the Pedicle of Solid Ovarian Tumors. M. Guibé.

54. **Spontaneous Opening into Bladder of Tuberculous Processes in the Adnexa.**—In Gras' compilation of 85 cases of pus in the pelvis finding spontaneously an outlet through the bladder, none was of tuberculous origin, and Violet and Chalier can find no record of such a case in the literature. They have encountered three cases which they report in detail. The women were 27, 32, and 48 years old, and only direct inspection of the parts removed revealed the tuberculous nature of the affection in the adnexa. The perforation into the bladder did not cause acute symptoms; the presence of pus in the urine was accidentally discovered. Pressure from without on the pus pocket caused more pus to accumulate in the bladder in one case, but the opening into the bladder was not discovered before the operation on the adnexa. There were no evidences of cystitis. The symptoms were those of ordinary salpingitis. Treatment in each case was by total abdominal hysterectomy with drainage through the vagina, the abdominal wound closed completely. The bladder perforation was so small in two cases that it was left to heal spontaneously; in the other, the area of bladder wall involved was excised and sutured. The patients are in good health to date, from one to nearly four years since operation.

Revue de Médecine, Paris

March, XXIX, No. 3, pp. 161-256

56 Physical Development in General Paralysis. R. Mignot.
57 *Psychic Disturbances in Affections of the Hypophysis. (Troubles psychiques dans les syndromes hypophysaires.) M. Laignel-Lavastine. Id. of Male Genital Organs. (Id. dans les syndromes génitaux males.) Id.
58 Local Adiposis After Experimental Lesions of the Sciatic Nerve. Rôle of Lymph Glands. L. Lortat-Jacob and G. Vitry.
59 *Hemiplegia from Cerebral Arteritis in Inherited Syphilis. P. Savy.

57. **Mental Disturbances in Affections of the Hypophysis and Male Genital Organs.**—Lavastine discusses the mental condition with giant growth and acromegaly and with insufficiency of the hypophysis, the evidence of defective or perverted functioning of the hypophysis being sustained in these cases by surgical findings and by the favorable results from organo-

therapy with hypophysis extract. The psychic disturbances are of the elementary form, as a rule, but he adds that the hypophysis may be responsible for even the more complex psychoses in some cases.

Psychic disturbances are comparatively frequent in affections of the male genital organs. Besides those connected with the loss of the functioning of the testicles, or their defective development, malformations or disturbances in the genitourinary apparatus are liable to entail depression, etc. The psychic reaction may range from simple apprehension to obsessions and hypochondriac delirium. These mental disturbances are most marked in gonorrheics, in whom the mental confusion, stupor and hallucinations may be pronounced. Infantile conditions in the genital organs may be paralleled by the psychoclinical syndrome of childishness in the mental makeup. The trouble is due to arrested development, free from evidences of toxic disturbances, thus differing decidedly from the disturbances resulting from ovarian insufficiency. On the other hand, proof is accumulating that certain mental disturbances may sometimes be the result of defective or perverted functioning of the prostate. Among the arguments that sustain this view are the experimental demonstration of the toxicity and blood-pressure-raising properties of the extract of the prostate from genitally active animals, the frequency of suicide after prostatectomy—three cases are on record—and the prevalence of neurasthenia among men with prostatitis—Drobny found pronounced neurasthenia in 162 out of 168 patients with a gonorrheal prostatitis, and 93 per cent. recovered from the neurasthenia as normal conditions were restored in the prostate. In contrast with these findings he encountered only 41 neurasthenics in 605 patients with chronic urethritis without involvement of the prostate.

59. **Hemiplegia from Cerebral Arteritis in Inherited Syphilis.**—Savy reviews the history of this subject and gives full summaries of 27 cases in which inherited syphilis manifested itself by hemiplegia generally overshadowed by other pathologic nervous manifestations and accompanied by complex anatomic lesions. In certain cases, mostly in infants, the hemiplegia comes on abruptly and subsides under the influence of specific treatment of the inherited syphilitic taint. A little impotence and atrophy may persist after the hemiplegia has subsided, or the condition may progress toward infantile spastic paralysis. The facts observed in infants and children are the same as in the syphilitic hemiplegia of adults; both are transient and both result from the specific arteritis in the brain with ischemia and possibly consecutive softening in the domain of the obliterated artery. It is a wise course to suspect a syphilitic origin in every case of hemiplegia coming on suddenly in an infant without appreciable cause, even when no signs of a syphilitic taint can be discovered. It is probable that infantile spastic paralysis is traceable to syphilis in many more cases than generally recognized.

Presse Médicale, Paris

March 31, XVII, No. 26, pp. 225-232

60 Infections and Suppurations of the Pancreas. J. -L. Faure.

April 3, No. 27, pp. 233-248

61 Mechanism of Death in Ileus. (Mécanisme de la mort dans l'occlusion intestinale.) M. Gulbé.
62 Appendicitis with Gall-Bladder Syndrome. (Appendice rétro-cæcal et syndrome cholécystique.) E. Mériel.
63 Clinical Examination of the Musculature of the Leg in Infantile Paralysis. C. Ducroquet.
64 Mechanism of Triangular Area of Dulness in Pleurisy. (Sur le triangle de Grocco.) J. de Barros.
65 Technic of Direct Visual Inspection of Upper Air Passages, Esophagus and Stomach. (Endoscopie directe.) F. Munch.

Semaine Médicale, Paris

April 7, XXIX, No. 14, pp. 157-168

66 *The Enteralgic Crises in Tabes. M. Loeper.
67 *Method of Reconstructing the Anal Sphincter. (Un Nouveau procédé opératoire pour la reconstitution du sphincter anal.) J. Schoemaker.

66. **Intestinal Crises in Tabes.**—Loeper explains the tabetic enteralgia as a lightning crisis of the posterior roots which blend into the sympathetic system innervating the intestine. It may be simple enteralgia or there may be choleriform or enteritic crises, of all of which he cites examples and reviews the cases on record. He does not think that drugs to reduce hypertension answer the main indication, preferring morphin, belladonna and atropin on account of their action on the contraction and secretion of the bowel. Surgical treatment is rarely to be considered as the intestinal crises are less tenacious than gastric crises and recurrences are less frequent. It is important to protect the patient from the injurious action of chilling and emotions. The diet does not seem to influence these crises directly, but preceding constipation or overloading of the intestines was noticed in all his cases.

67. **Operation for Incontinence of the Anus.**—Schoemaker has been successful in treating incontinence by separating the gluteus maximus muscle on each side and drawing a bunch of its fibers across to the corresponding muscle on the other side, suturing it to the ischium. One strip passes above and one below the anus in opposite directions, and the two are sutured together on each side of the anus. The technic is shown in an illustration; the result has been perfect continence, the patient being able to retain even an injection of glycerin. The anal sphincter had become paralyzed after several operations for prolapse of the rectum. In detaching the strips, which are 3 or 4 cm. wide, he was careful not to molest the nerve.

Archiv für klinische Chirurgie, Berlin

LXXXVIII, No. 4, pp. 963-1127. Last indexed April 10, p. 1215

68 Rare Forms of Atheroma. W. Zimmermann.
69 *Direct Massage of the Heart in Apparent Death. (Ueber directe Massage des Herzens als Mittel zur Wiederbelebung.) M. v. Cackovic.
70 Hyperemic Treatment. (Ueber Behandlung mit Hyperämie nach Bier.) P. Assmy.
71 Retroperitoneal Lymph Cysts and Cysts in the Pancreas. R. v. Hippel.
72 Complete Sterilization of Catgut by Hofmeisters' Technic. (Ist das nach Hofmeister präparirte Catgut steril?) O. Haist.
73 Cystic Degeneration of Fungous Enlarged Papillæ of the Tongue. (Ueber die cystische Degeneration der fungiformen Zungenpapillen.) E. Rehn.
74 Anterior Subluxation of Wrist. (Madelung'sche Handgelenksdeformität.) Gaugele.
75 *Possible Harm from Gymnastic Exercises in Treatment of Scoliosis. (Kann Gymnastik in der Skoliosenbehandlung schädlich wirken?) A. Schanz.
76 *Physiologic Extirpation of Gasserian Ganglion. J. W. Rasumowsky.
77 Firearm Wounds of Stomach with Retained Bullet. (Ueber Schussverletzungen des Magens mit Steckenbleiben der Kugel.) S. Softeroff.

69. **Direct Massage of the Heart in Apparent Death.**—Cackovic's attention was attracted to this subject by a case of what proved to be "thymus death" under chloroform. The patient was a boy of 9 being operated on for harelip. When the operation was nearly concluded, the heart stopped beating and as a last resort the heart was exposed and massaged. Cackovic has found 45 cases on record in which this was done and devotes nearly seventy pages to analysis of the details and results. The massage succeeded in resuscitating the patients in 17 cases and in 9 of these the patient completely recovered, in the others the heart action failed again after working for a longer or shorter interval. In all but 5 cases the syncope occurred under an anesthetic; in the others from embolism in the pulmonary artery or as the result of attempted suicide by hanging, asphyxia from some laryngeal or tracheal affection or in a new-born infant. The best results were obtained with massage applied from below the diaphragm; it failed in every case with the transdiaphragmatic technic. The outcome was better the earlier after the syncope the massage was undertaken; the first five minutes gave the majority of successes while the massage failed constantly if ten minutes had elapsed after the onset of the syncope before the massage was commenced. The prospects are more favorable for direct massage of the heart when the syncope is of circulatory rather than of respiratory origin. When other means of resuscitation fail to elicit the slightest response, and especially in "white" syncope, direct massage is justified; the heart is grasped through the diaphragm, the hand being inserted through an incision above the umbilicus. The ventricles are squeezed rhythmically between the fingers or the heart is pushed against the front wall of the chest. The massage must be kept up for a long time supporting the spontaneous contractions as otherwise the heart may flag again. Some-

times fully fifteen minutes elapsed before the heart responded to the effect of the massage. Artificial respiration and traction of the tongue should be kept up with possibly tracheotomy or intubation to ensure a rhythmic supply of air or oxygen to the lungs; the pelvis should be raised and the abdomen compressed to aid in increasing the blood pressure by overcoming the paralysis of the vasomotors, supplemented by saline infusion and possibly also injection of adrenalin.

75. **Gymnastic Treatment of Scoliosis.**—Schanz says that several years' experience has convinced him that the improvement obtained by exercises in scoliosis is only apparent in fully 99 per cent. of the cases. Exercising is important as a means of improving the general health, but its action on the scoliosis is not so beneficial as is generally assumed, and it may be directly harmful. If the scoliosis is progressing or becoming aggravated, the exercises are directly injurious. Tapping along the spine will reveal painful points in these cases, and their discovery is a contraindication to gymnastics, as also with similar findings in simple insufficiency of the spine without curvature. Every effort should be made to cure this insufficiency of the spine or to reduce it before attempting exercise treatment, and even then the latter should be cautiously applied.

46. **"Physiologic Extirpation" of Gasserian Ganglion.**—Rasumowsky reports a case in which he successfully isolated the Gasserian ganglion by severing the root behind it, the so-called physiologic extirpation, without removal of the ganglion. The patient was a man of 38; two operations had been performed on the trigeminus for neuralgia, but with only transient results. The isolation of the Gasserian ganglion banished the pain at once and permanently. Besides severing the root back of the ganglion Rasumowsky resected a considerable extent of the second and third branches. His patient developed an eye affection, opacity of the cornea and synechia on that side, possibly from irritation from some foreign body in the eye which he was unable to feel. Otherwise he is free from disturbances.

Beiträge zur klinischen Chirurgie, Tübingen

March, LXII, No. 1, pp. 1-384

78 *Isolated Incarceration of Appendix in Hernias. (Ueber isolierte Brucheinklemmung des Wurmfortsatzes.) C. Schnitzer.
79 *Internal and External Supravesical Hernia. (Die intra-abdominalen Hernien der Foveae supravesicales. Die äussern Hernien der Foveae supravesicales.) A. Reich.
80 *Fracture of the Malleolus. Meissner.
81 Ramrod Shot Lengthwise through Hand and Forearm. (Eine seltene Schussverletzung mit dem Ladestock.) Id.
82 *Behavior of the Heart in Goiter. (Verhalten des Herzens bei Struma.) O. Müller and Schlayer.
83 Spiral Fracture of Metacarpal Bones. (Spiralbrüche der Metacarpalknochen.) Blauel.
84 Tabetic Arthropathy of Hip Joint. (Tabische Arthropathie des Hüftgelenks.) E. Schwarz.
85 *Traumatic Central Luxation of the Femur and its Importance in Obstetrics. (Die traumatische Luxatio centralis femoris.) K. Henschen.

78. **Isolated Incarceration of Appendix in Hernia.**—Schnitzer reviews 10 such cases encountered at the Tübingen surgical clinic and summarizes 22 others from the literature. He expresses surprise that the incarcerated appendix was reduced in so many cases without disturbances from it later; its removal seems urgently indicated even when it is apparently normal, as the results of the incarceration must lower its resisting power.

79. **Hernia in the Space Above the Bladder.**—Reich gives the particulars of 3 cases of intra-abdominal hernia in the supravesical space and reviews 9 other cases on record, with 4 others to some extent approximating them. This form of hernia has been classified as prevesical, supravesical and anterior retroperitoneal; the patients were all elderly men in the typical cases. The hernia is evidently the result of some congenital tendency; it causes no disturbance unless it becomes incarcerated, when vague and varying symptoms suggest subacute, sometimes remittent ileus. A distended loop of intestine may be seen above the symphysis, and there is also circumscribed pain, but no palpable tumor at this point. The most instructive finding is a protuberance in the bladder wall, revealed by cystoscopy. The main point in the diagnosis is to bear in mind the predisposition of the space above the bladder to this typical internal hernia. Operative treatment is imperative if no improvement is observed within twenty-four hours. He has not been able to find any record in German literature of external hernia in this region, but has compiled from outside 26 cases.

80. **Fracture of the Malleolus.**—Meissner remarks that the Roentgen technic and the legislation in regard to industrial accidents have made the treatment of fractures one of the most important questions of the day. The experiences at von Bruns' clinic at Tübingen with fracture of the malleolus are then reviewed, 151 recent cases and 60 of long standing, with illustrations of 38 forms of fracture in this region. The fracture entailed fatal fat embolism in 4 instances.

82. **The Heart in Goiter.**—Blauel discusses the behavior of the heart in patients with goiter, summarizing the details of 95 operative cases of goiter at Bruns' clinic at Tübingen. In 68 cases the after-history of the patients is included. The mechanical influence of the goiter on the heart was evident in 65 cases; examination later showed that the heart seldom returned to normal after removal of the mechanical influences. The heart had evidently felt the effect of the toxic action of the goiter to such an extent as to be unable to recuperate after its removal. The material reviewed confirms further the frequency of transition of a "thyrotoxic heart" into the complete syndrome of exophthalmic goiter. The blood picture may decide the clinical status of the toxic "goiter heart" better, perhaps, than the single symptoms.

85. **Central Dislocation of the Femur.**—Henschen's patient was a young woman five months pregnant when the head of the femur was driven into the pelvis by a fall from a wagon. He discusses this form of dislocation and especially its obstetric importance, having found 31 cases on record of its occurrence in pregnant women. To these he adds a list of 64 cases of simple and compound fracture of the floor of the acetabulum and 44 others of central luxation, summarizing the details of each and emphasizing the importance of refraining from bearing weight on the limb until after reduction and retention of the femur in its normal place. He warns expressly against attempting to reduce the head of the femur by manipulations through the rectum, although this is advisable to reduce the fragments of bone after the head has been restored to place. A plaster cast extending above the costal arch is necessary to retain the parts in the desired position, the hip being flexed and in adduction, with longitudinal extension, the technic for which is described in detail. The patient must stay in bed for two or three months; premature use of the limb will annul or render impossible good results from treatment.

Berliner klinische Wochenschrift

March 22, XLVI, No. 12, pp. 529-576

86 *Tumor in Spinal Cord Simulating Myelitis. (Rückenmarkstumor unter dem Bilde einer Myelitis verlaufend.) C. A. Ewald and R. Winckler.
87 *Bronzed Diabetes and Cirrhosis with Pigmentation. (Bronzediabetes und Pigmentcirrhose.) M. Simmonds.
88 Location of Pyloric Outlet. (Wo ist die Portio pylorica?) J. W. T. Lichtenbelt.
89 Importance of Shape of Zones of Anesthesia. (Bedeutung der Gestalt der beiden anästhesischen Zonen.) G. Calligaris.
90 *Habitual Constipation as Cause of Death in Infants. (Habituelle Verstopfung als Todesursache im Säuglingsalter.) B. Glaserfeld.
91 *Serodiagnosis in Congenital Syphilis. (Die Wassermann'sche Reaktion bei kongenitaler Syphilis.) O. Thomsen and H. Boas.
92 Cotton Holder for Treating the Ear in Otitis. (Ohrpinzette und Watteröllchen bei Ohreiterungen.) Sprenger.
93 *Differentiating Stethoscope. (Verwendbarkeit des Differential-Stethoskopes nach Dr. Bock.) H. Bock.

86. **Spinal Tumor Simulating Myelitis.**—In the case reported by Ewald and Winckler, the patient was a motorman of 27, previously healthy until paraplegia of the legs suddenly developed with enlargement of the spleen, suggesting an infectious myelitis, although there was no fever or tenderness of the spine. The patient died with symptoms of pneumonia in two months. The case resembles one described by Nonne; in both autopsy revealed a tumor compressing the spinal cord, a sarcoma originating in the dura or epidural connective tissue.

87. **Bronzed Diabetes and Cirrhosis with Pigmentation.**—Simmonds reports two cases of cirrhosis of the liver with glycosuria and pronounced hemochromatosis or bronzing. In two other cases the diabetes was associated with cirrhosis of the liver, but there was very little pigmentation. In three other cases cirrhosis of the liver was accompanied by such pronounced bronzing that the cases were typical of what the French call "pigment cirrhosis," but there were no indications of diabetes. In 16 similar cases compiled by Anschütz there were no traces of glycosuria in 6, and in 2 others on record glycosuria, present for some time, subsided for longer or shorter periods. Simmonds reasons from these data that in bronzed diabetes the triad of symptoms is the result of a single injurious influence, generally abuse of alcohol. The same injurious influence is responsible for the cirrhosis of the liver, the pigmentation and the changes in the pancreas with the resulting diabetes.

90. **Habitual Constipation as Cause of Death in Infants.**—Glaserfeld ascribes the constipation in the case described to a congenital physiologic anomaly in the wall of the large intestine although anatomically it seemed quite normal. He does not venture to decide whether weakness in the intestinal musculature or sluggish innervation is responsible for the trouble. The constipation had existed from birth and proved fatal within six months. The case teaches the importance of energetic measures to combat constipation in infants, although in these severe cases the outlook is not promising.

91. Abstracted in THE JOURNAL, April 3, page 1152.

93. **Differentiating Stethoscope.**—The stethoscope described by Bock allows the strength of the different sounds to be estimated and he describes a number of important points which may be learned with it, supplementing the findings by other methods and revealing aortic insufficiency, myocarditis, etc., and discriminating between true and false gallop rhythm. He says that the percussion findings with this stethoscope are more precise than with orthodiagraphy even when the heart is entirely covered by the lungs. Enlarged bronchial glands are readily diagnosed and pleuritic effusions outlined. The principle on which the stethoscope is based is the muffling of the sound to the limit of audibility—the amount of muffling required to render the different notes inaudible is the measure of their strength.

Deutsches Archiv für klinische Medizin, Leipsic

XCV, Nos. 5-6. Last indexed March 27, p. 1070

94 Case of Acanthosis nigricans. H. Pribram.
95 Transformation of Nitrogen in Lead Poisoning. (Stickstoffumsatz bei der Bleivergiftung.) L. Preti.
96 *Importance of Higher Temperature for Production of Antibodies. (Bedeutung der Temperatursteigerung für die Antikörperproduktion.) H. Lüdke.
97 Experimental Research on Percussion of the Thorax. (Zur Lehre von der Perkussion der Brustorgane.) F. Moritz and W. Röhl.
98 Elimination of Ammonia by the Mouth in Uremia. (Ueber Ammoniakausscheidung aus dem Munde von Urämikern.) Tiedemann and Keller.
99 Artificial Plethora and the Work of the Heart. (Künstliche Plethora und Herzarbeit.) R. Hess.
100 Relations between Free Hydrochloric Acid, Total Acidity, Pepsin and Dissolved Nitrogen. (Verhältnis von freier Salzsäure, Gesamtacidität, Pepsin und gelöstem Stickstoff.) C. Rose.
101 Comparative Research with the Salomon Test and the Grafe-Röhmer Hemolysin Method for Testing the Functioning of the Stomach. (Vergleichend diagnostische Untersuchungen bei Magenkrankheiten.) Id.
102 Head Apparatus for Tests of Respiratory Interchanges, Etc. (Ein Kopfrespirationsapparat.) E. Grafe.
103 Gaseous Interchanges in Advanced Affections of the Lungs and Circulatory Organs. (Gaswechseluntersuchungen bei fortgeschrittenen Erkrankungen der Lungen und der Zirkulationsorgane.) Id.
104 Acute Benign Exfoliating Dermatitis. von Criegern.
105 Dry Residue and Behavior of Blood on Intake of Water by the Digestive Tract. (Experimentelle Untersuchungen über die Bestimmung der Trockenrückstande des Blutes und das Verhalten des Blutes bei Wasserzufuhr durch den Verdauungskanal.) A. Plehn. Id. R. Chiarolanza.

96. **Influence of Higher Temperature on Production of Antibodies.**—Lüdke reports that increased production of antibodies always accompanied the raising of the body temperature in his experiments, no matter whether the temperature was raised by heat externally applied, by stimulation of the heat center or by injection of chemicals which increase the temperature. The higher temperature had the constant effect of stimulating, promoting and increasing the production of antibodies, and if this production had died down it aroused it again to a slight extent. It is still a question whether the increased temperature is directly the cause of the increased production of antibodies or whether the benefit is by the intermediation of the stimulation of the oxidations by the increased warmth. The theory seems plausible that the increased breaking down of albumin in febrile states allows increased production of the antibodies, that is, of the side chains which have the effectual specific action. The assumption seems logical that the fever in infections is a salutary process if the conclusions of experimental research may be applied to man. The mere increase in the amount of antibodies is not necessarily salutary unless there is increased power of combination between the antigen and the produced antibody. The beneficial effects of hot baths and sweating procedures may possibly be due to an increased production of the protecting substances under their influence. His experiments on animals confirm this assumption, as also his tests on himself, showing always increased amounts of agglutinins in the blood serum after hot baths. The normal temperature rose by one degree C. after ten minutes in a bath at 40 C., and it rose to 35 or 40 C. (104 F.) in a ten-minute bath at 45 C. (113 F.).

Deutsche medizinische Wochenschrift, Berlin

April 1, XXXV, No. 13, pp. 561-608

106 *Forceps Deliveries. (Ueber Indikation und Technik der Zange.) H. Sellheim.
107 Tests of Antityphoid Serum. (Prüfung des Meyer-Bergellschen Typhusserums.) W. Hoffmann.
108 Reciprocal Agglutination of Typhoid and Paratyphoid B. Bacilli. J. W. Schultz.
109 Sources of Error and Extent of Error in Opsonin Tests. (Fehlergrösse und die Fehlerquellen im Opsoninversuch.) W. Busse.
110 Origin and Importance of Antitrypsin, especially in Cancer. (Entstehung und klinische Bedeutung des Antitrypsins, insbesondere bei Krebskranken.) A. Braunstein.
111 Action of Suprarenal Preparation on Frogs' Eyes. (Wirkung von Adrenin auf die Froschpupille.) S. J. Meltzer.
112 Simple Method for Determination of Adrenalin in Suprarenal Tissue. (Zur Bestimmung des Adrenalins im Nebennierengewebe.) G. Comessatti.
113 *Experiences with Prostatectomy. A. Cahn.
114 Radiometer. (Ein neuer Radiograph.) P. Lepper.

106. **Indications and Technic for Use of Forceps in Obstetrics.**—Sellheim concludes by emphasizing that the forceps may prove very useful and do no harm if the birth has progressed far enough so that no more force is required than in the natural process of expulsion. When greater force is necessary to overcome the resistance of the soft parts, it is at the expense of the mother, while if the resistance is from the bones, both mother and child suffer. Forcible measures are therefore contraindicated when the necessary maneuvers are liable to prove more dangerous than extraperitoneal Cesarean section.

113. **Prostatectomy.**—Cahn states that microscopic examination of the enlarged prostate after its removal by Israel in forty cases invariably revealed new growth starting in the epithelium of the gland—a papillary adenoma. In one case transition into a carcinoma was manifest. These findings suggest that hypertrophy of the prostate must be regarded as a true epithelial new growth, with nothing in common with inflammatory changes. Six of the forty patients succumbed soon after the operation, one to anuria and uremia the second day, one to diabetic coma eleven days afterward, two to embolism in the pulmonary artery, and one to postoperative pneumonia. The sixth died on the third day from peritonitis, and autopsy disclosed a small patch of gangrene in the peritoneum. The other thirty-four patients were completely cured by the operation, except that there is incontinence in two cases.

Fortschritte der Medizin, Leipsic

March 20, XXVII, No. 8, pp. 305-336

115 *Paraffin in Treatment of Umbilical Hernia. (Paraffinbehandlung der Nabelbrüche.) Burckhardt.

115. **Paraffin in Treatment of Umbilical Hernia.**—Burckhardt thinks that the anatomic conditions offer peculiar advantages for the use of paraffin in treatment of umbilical

hernias. After painstaking disinfection of the field of operation and of the hands, he lifts up the hernial sac with the left hand. The contents slide back and the tip of the syringe needle is inserted in the sac with the right hand. About 3 or 4 c.c. of paraffin, heated to 65 C. (149 F.), are injected, and the left hand releases the hernia so that it spreads out again to its original size. Ethyl chlorid is then sprayed for half a minute after withdrawal of the needle. The spot is then covered with a flat pad of medicated gauze fastened with adhesive plaster, and a strip of adhesive plaster around the abdomen completes the dressing. The injected paraffin thus spreads out over the hernia like a cap and hardens under the anesthetic, forming a broad plate extending on all sides beyond the area of the hernia, holding back the intestines and by the irritation induced causing production of adhesions. The method is applicable only to hernia not larger than 1 cm. in diameter; if larger than this several sittings are required. If too much paraffin is injected the result is cumbersome and disfiguring. The most important point in the technic is to use only hard paraffin, with a melting point at 54 C. (159 F.). He has thus treated a number of children under 12 during the last four years, and the prothesis has persisted unmodified except for the ingrowing of connective tissue into the paraffin. The procedure requires only a minute, and he has heard no complaints from any one except at the moment the needle is first introduced.

Medizinische Klinik, Berlin

March 28, V, No. 13, pp. 457-490

116 *Pathogenesis and Therapeutics of Diarrhea. (Ueber Durchfall.) A. Schmidt.
117 Height and Weight in Determination of Condition of Nourishment. (Brauchbarkeit der "proportionellen" Körperlänge als Massstab für die Berechnung des Körpergewichts erwachsener Menschen bei normalem Ernährungszustand.) G. Oeder.
118 *Gastric Cancer. (Zur Diagnostik und Symptomatologie des Magenkarzinoms.) R. Latzel.
119 Symptoms and Diagnosis of Diverticulum in the Esophagus. S. Isaac.
120 Hemophilia and Accidents. (Hämophilie und Unfall.) W. Pullmann.
121 Retention of Consciousness under Large Amounts of Chloroform, Etc. (Ausbleiben der Wirkung auf das Bewusstsein bei ungewöhnlich grossen Mengen von Narkoseflüssigkeit.) H. Cramer.
122 Adsorption in Solutions. (Der heutige Stand der Lehre von der Adsorption in Lösungen.) L. Michaelis.
123 Vegetarian Diet in Health. (Die vegetarische Lebensweise bei Gesunden.) H. Determann.

116. **Diarrhea.**—Schmidt thinks that in many cases diarrhea is the result of abnormal secretion in the intestine of a fluid which putrefies easily. He has found hydrogen dioxid the most efficient intestinal disinfectant and the most harmless. Pure agar-agar takes up from 10 to 12 per cent. hydrogen dioxid and yields it up very slowly, so that this combination supplies nascent oxygen to the intestine.

118. **Gastric Cancer.**—Latzel states that there is no other affection which so frequently presents symptoms and course entirely opposite to the teachings of the text-books, and cites numerous cases to illustrate his assertion. In some cases the patients gained in weight; in others the palpable cancer was scarcely painful even on pressure. Colic and peristalsis are liable to be more pronounced with benign than with malignant disease, as the muscle is more atrophied with the latter.

Münchener medizinische Wochenschrift

March 30, LVI, No. 13, pp. 641-696

124 *Development of Coxa Vara after Reduction of Congenital Dislocation of Hip Joint. (Ueber Coxa vara-Bildung nach der Reposition der angeborenen Hüftverrenkung.) Joachimsthal.
125 *Bismuth Poisoning and a Non-Toxic Substitute for Bismuth in Roentgen-ray Work. (Ueber Wismutvergiftung.) L. Lewin.
126 Further Research on Chlamydozoa. S. v. Prowazek and H. B. Aragao.
127 Pains in Knee with Affections of Hip Joint. (Ueber Kniescherzen bei Hüfterkrankungen.) H. Heineke.
128 *Trauma of Skull and Injury of Brain. (Schädeltrauma und Gehirnverletzung.) Weyert.
129 Test for Glycuronic Acid. (Ueber den Glykuronsäurenachweis durch die B. Tollensche Reaktion mit Naphthoresorzin und Salzsäure.) C. Tollens.
130 Chronic Dilatation of Large Intestine in the Elderly. (Chronische Dilatation des Dickdarms im höheren Alter.) M. Versé.
131 Anesthetization of the Tympanum. (Zur Anästhesierung des Trommelfells und der Paukenhöhle.) G. Tiefenthal.
132 Sunlight Treatment of Laryngeal Tuberculosis. (Zur Technik der Sonnenlichtbehandlung der Kehlkopftuberkulose.) H. Kraus.
133 Recording of Lung Findings. (Die graphische Darstellung des Lungenbefundes.) O. Pischinger.
134 Standardization of Digitalis. (Wie können die Digitalisblätter mit gleichbleibendem Wert in das Arzneibuch eingeführt werden?) Focke.

124. **Coxa Vara After Reduction of Congenital Dislocation of Hip Joint.**—Joachimstal describes three cases in which coxa vara developed after successful reduction of congenital dislocation. The Roentgen findings and the progressive character of the disturbance seem to show a process of local softening in the atrophic and thus less resistant bone. As these softening processes are favored by long immobilization, this tardy complication is another argument for shortening the period of immobilization after correction of congenital dislocation of the hip joint. Roentgen examination will reveal the incipient disturbance, he says, and energetic measures should be instituted at once. With massage and exercises in abduction and extension he was able to induce marked improvement in the one case in which the softening of the neck of the femur had induced functional disturbance. The patients were between 2 and 6 years old when treatment was begun.

125. **Efficient Substitute for Bismuth in Roentgen-Ray Work.**—Lewin insists that the symptoms of bismuth intoxication are due to the bismuth itself, not to production of nitrites, consequently it is useless to seek for other salts of bismuth to replace the subnitrate in Roentgen work. After long research he has found that magnetic oxid of iron—*Magneteisenstein*—is peculiarly adapted for the purpose, as it is non-toxic, while it arrests the rays and is insoluble in the stomach and intestines. Roentgen pictures taken with this oxid far surpass in delicacy of outlines those he has ever obtained with bismuth.

128. **Cranial Trauma and Injury of the Brain.**—Weyert discusses the symptoms in three cases of injury of the brain, remarking that a sound brain may bear a severe trauma to the skull without injury, but if the resistive vitality of the brain is lowered for any reason it reacts with serious consequences to even very slight trauma. He is convinced that many cases of so-called traumatic neurosis are in reality the result of unsuspected organic injury of the brain. Patients with cranial trauma should be referred to psychiatrists earlier and more often than is generally the case.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

PURE MILK AND THE PUBLIC HEALTH. A Manual of Milk and Dairy Inspection. By Archibald Robinson Ward, B.S.A., D.V.M., Assistant Professor of Bacteriology and Director of the State Hygienic Laboratory, University of California, Berkeley, Cal. With Two Chapters by Myer Edward Jaffa, M.S., Professor of Nutrition and Director of the State Food and Drug Laboratory, University of California. Cloth. Pp. 218, with illustrations. Price $2. Ithaca, N. Y.: Taylor & Carpenter, 1909.

DURABILITY AND ECONOMY IN PAPERS FOR PERMANENT RECORDS. Report No. 89, U. S. Dept. Agric. Submitted by H. W. Wiley, Chief Bureau of Chemistry, and C. Hart Merriam, Chief Bureau of Biological Survey, Committee on Paper for Departmental Use. Including PAPER SPECIFICATIONS, by F. P. Veitch, Chief, Leather and Paper Laboratory, Bureau of Chemistry. Paper. Pp. 51. Washington: Government Printing Office, 1909.

THE LAW IN GENERAL MEDICAL PRACTICE. By Stanley B. Atkinson, M.A., M.B., B.Sc., Justice of the Peace for the County of London. Cloth. Pp. 239. Price $3. [NOTE: Previous announcement in this column that price was $1.50 was not correct.] New York: Oxford University Press, 1908.

A GUIDE TO THE TWELVE TISSUE REMEDIES OF BIOCHEMISTRY. The Cell-Salts, Biochemic or Schuessler Remedies. By E. P. Anshutz. Cloth. Pp. 91. Price, 75 cts. Philadelphia: Boericke & Tafel, 1909.

PROCEEDINGS OF THE TWENTY-THIRD ANNUAL MEETING OF THE CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA. Washington, D. C., Sept. 25-26, 1908. Cloth. Pp. 207.

THE FAITH AND WORKS OF CHRISTIAN SCIENCE. By the Author of "Confessio Medici." Cloth. Pp. 225. Price $1.25. New York: The Macmillan Co., 1909.

TRANSACTIONS OF THE SEVENTEENTH ANNUAL MEETING OF THE HAWAIIAN TERRITORIAL MEDICAL SOCIETY, Held in Honolulu, Nov. 21-23, 1908. Paper. Pp. 122.